



Digitized by the Internet Archive
in 2021 with funding from
Wellcome Library

412
REPORT OF THE PROCEEDINGS

OF THE

NORTHUMBERLAND AND DURHAM

MEDICAL SOCIETY.

SESSION 1873-74.

NEWCASTLE-UPON-TYNE :

PRINTED BY M. AND M. W. LAMBERT, No. 50, GREY STREET.

1874.

OFFICERS FOR THE SESSION 1873-4.

President.

G. H. PHILIPSON, M.D.

Vice-Presidents.

M. BURNUP, M.D.
S. W. BROADBENT.

L. ARMSTRONG, M.D.
R. S. PEART, M.D.

Secretary.

HENRY E. ARMSTRONG.

Committee.

W. C. ARNISON, M.D.
BYROM BRAMWELL, M.D.
J. S. DENHAM, M.D.
F. PAGE, M.D.
THOMAS HUMBLE, M.D.

C. CARR.
J. HAWTHORN.
J. RUSSELL.
C. S. REDMOND.

Honorary Members.

T. M. GREENHOW, M.D., Roundhay, Leeds.
G. ROBINSON, M.D., London.

WELLCOME INSTITUTE LIBRARY	
Coll.	WelMOMec
Coll.	
No.	

LIST OF MEMBERS.

AITCHISON, A., Jun., M.D.	...	...	...	...	Barras Bridge
ANNANDALE, T.	...	...	...	...	Edinburgh
ARMSTRONG, LUKE, M.D.	...	...	...	...	Clayton Street
ARMSTRONG, H. E.	...	...	...	...	Belgrave Terrace
ARNISON, W. C., M.D.	...	...	...	...	Northumberland Street
ARUNDELL, SHIRLEY	...	...	...	...	Gateshead
ATKINSON, J. I.	...	...	...	...	Wylam
BANNING, R. J., M.D.	...	...	...	...	Gateshead
BARKAS, W. J.	...	...	...	...	Rye Hill
BARKUS, B., M.D.	...	...	...	...	Gateshead
BELL, A.	...	...	...	...	Eldon Square
BLACKETT, G. P.	...	...	...	...	Whickham
BLACK, J. G., M.D.	...	...	...	...	Clayton Street
BLANDFORD, J. W.	...	...	...	...	Coxhoe
BOLTON, ANDREW, M.D.	...	...	...	...	Westgate Street
BRAMWELL, J. B., M.D.	...	...	...	...	North Shields
BRAMWELL, BYROM, M.D.	...	...	...	...	North Shields
BROADBENT, SAMUEL W.	...	...	...	...	South Hetton
BURNUP, M., M.D.	...	...	...	...	Derwent Place
CARR, C.	...	...	...	...	Blackett Street
CHARLTON, E., M.D.	...	...	...	...	Eldon Square
CLARKE, R.	...	...	...	...	Marlborough Crescent
COCKCROFT, G. E.	...	...	...	...	Hurworth
COOK, R. F., M.D.	...	...	...	...	Gateshead
COWARD, W. R.	...	...	...	...	Tyne Dock
CREIGHTON, THOMAS	...	...	...	...	Morpeth
DAVIS, R.	...	...	...	...	Wrekenton
DAVISON, R. S.	...	...	...	...	Newburn
DENHAM, J. S., M.D.	...	...	...	...	South Shields
DODD, T. A. H.	...	...	...	...	Bentinck Villas
DOUGLAS, MORDEY	...	...	...	...	Sunderland
DOUGLASS, GEORGE, M.D.	...	...	...	...	Gateshead
EASTWOOD, J. W., M.D.	...	...	...	...	Dinsdale Park
ELLIS, R.	...	...	...	...	Rye Hill
EMBLETON, D., M.D.	...	...	...	...	Eldon Square
FENNELL, THEODORE	...	...	...	...	Washington
FIELDEN, S.	...	...	...	...	Shildon
FOSS, R. W., M.D.	...	...	...	...	Stockton-on-Tees
FOTHERGILL, S.	...	...	...	...	Haswell
FOTHERGILL, J. R.	...	...	...	...	Darlington
FRAIN, J., M.D.	...	...	...	...	South Shields
GALLOWAY, WALTER	...	...	...	...	Wrekenton
GAMMAGE, R. G.	...	...	...	...	Sunderland
GIBB, C. J., M.D.	...	...	...	...	Westgate Street
GIBSON, C., M.D.	...	...	...	...	Eldon Square
HARDCASTLE, N.	...	...	...	...	Clayton Street
HARDY, H. G.	...	...	...	...	Byers Green
HAWTHORN, J.	...	...	...	...	Portland Place
HEATH, G. Y., M.D.	...	...	...	...	Westgate Street
HEFFERNAN, E.	...	...	...	...	Spennymoor
HIND, HENRY	...	...	...	...	Stockton-on-Tees
HOPE, J.	...	...	...	...	Eldon Square
HOUSEMAN, J., M.D.	...	...	...	...	Barras Bridge
HUMBLE, T., M.D.	...	...	...	...	Eldon Square
HUME, GEO., M.D.	...	...	...	...	Westgate Street

HUNTLEY, R. E., M.D.	...	...	...	...	Jarrow
HUTCHINSON, V., M.D.	...	...	...	...	Bishop Auckland
FANSON, W. ...	...	...	...	...	Cumberland Row
JACKSON, T. H., M.D.	...	...	...	...	Darlington
JACKSON, ROBT., M.D.	...	...	...	...	Jarrow
JACKSON, E. ...	...	...	...	...	Darlington
JEAFFRESON, C. S. ...	...	...	...	...	Hood Street
JOBSON, J. ...	...	...	...	...	Bishop Auckland
JONES, F. D., M.D.	...	...	...	...	Washington
KAYE, W. T. ...	...	...	...	...	Gateshead
LEGAT, ANDREW, M.D.	...	...	...	...	South Shields
LIGHTFOOT, R. T. ...	...	...	...	...	Northumberland Street
LIGHTFOOT, ROBERT, M.D.	...	...	...	...
LINTON, RALPH ...	...	...	...	...	Chester-le-Street
LYNN, ROBT., M.D.	...	...	...	...	Cumberland Row
MACAULAY, JOHN, M.D.	...	...	...	...	Ryehill
MACLACHLAN, ALEX.	...	...	...	...	Higham Place
MACRAE, JOHN ...	...	...	...	...	Gateshead
MADDISON, N. P. ...	...	...	...	...	Jarrow
MCBEAN, SAMUEL ...	...	...	...	...	Portland Place
MANFORD, F. W. ...	...	...	...	...	Regent Terrace
MANSON, R. T. ...	...	...	...	...	Howden-le-Wear
MERSON, JOHN ...	...	...	...	...	Morpeth
MILLER, J. ...	...	...	...	...	Eldon Square
MORGAN, G. B. ...	...	...	...	...	Sunderland
MURRAY, S. H. L. ...	...	...	...	...	New Bridge Street
NESHAM, T. C., M.D.	...	...	...	...	Northumberland Street
NEWCOMBE, F. W., M.D.	...	...	...	...	Gateshead
NEWTON, H. W. ...	...	...	...	...	Hood Street
NEWTON, R. C. ...	...	...	...	...	Barras Bridge
O'HANLEN, J. C. ...	...	...	...	...	Spennymoor
PAGE, F., M.D. ...	...	...	...	...	Infirmary
PEART, ROBERT S., M.D.	...	...	...	...	North Shields
PHILIPSON, G. H., M.D.	...	...	...	...	Saville Row
REDMOND, C. S. ...	...	...	...	...	Gateshead
REOCH, JAMES, M.B.	...	...	...	...	Newcastle
ROBSON, JAMES ...	...	...	...	...	South Shields
ROBSON, R. N. ...	...	...	...	...	Durham
ROLF, ALFRED G. ...	...	...	...	...	Gateshead
RUSSELL, J. ...	...	...	...	...	Percy Street
SHIELL, W. R. ...	...	...	...	...	Chester-le-Street
STEPHENS, T. ...	...	...	...	...	North Shields
TENNANT, GEO. ...	...	...	...	...	Dispensary
THORNHILL, J. ...	...	...	...	...	Bulman Village
WALLIS, J. M. A. ...	...	...	...	...	Sedgefield
WARD, H. D., M.D.	...	...	...	...	Blyth
WEAR, ARTHUR T. ...	...	...	...	...	Newcastle
WICKHAM, R. H. B.	...	...	...	...	Coxlodge
WILLIAMSON, J., M.D.	...	...	...	...	South Shields
WILSON, ADAM ...	...	...	...	...	Newcastle
WILSON, R. H., M.D.	...	...	...	...	Gateshead
WILSON, THOMAS ...	...	...	...	...	Wallsend
WILSON, SAMUEL ...	...	...	...	...	Westoe
WILSON, ROBERT, M.D.	...	...	...	...	Alnwick
WOOD, T. O. ...	...	...	...	...	Dunston Lodge

NORTHUMBERLAND & DURHAM MEDICAL SOCIETY.

THE annual meeting of the Northumberland and Durham Medical Society was held on Monday evening, September 29th, 1873. Dr. Philipson, President, occupied the chair.

The following gentlemen were elected members :—

Mr. W. J. Barkas, Newcastle-on-Tyne.
Dr. Robert Wilson, Alnwick
Dr. J. C. O'Hanlen, Spennymoor.

The following gentlemen were proposed for election as members:

Mr. Arthur T. Wear, Newcastle Dispensary.
Mr. George Blacker Morgan, Sunderland
Mr. N. P. Maddison, Jarrow.

The SECRETARY read the following

REPORT OF THE COMMITTEE.

Your Committee have much pleasure in reporting as to the satisfactory condition of the Society, and the amount of work done during last session.

The attendance of members has been remarkably good throughout. From the unusual amount of matter brought before the Society, it was requisite to hold an adjourned meeting on the 27th March, at which no less than five papers were read.

Fourteen papers have been read; fourteen patients, and thirty-eight pathological specimens have been exhibited; and in addition, some interesting surgical and ophthalmic appliances have been brought before the Society.

The Committee notice with feelings of regret the removal by death of three of the members of the Society. The untimely fate of Mr. Arthur Herbert Walpole, who died in December last, from fever caught in the discharge of his duty, has removed from among us one of the most promising members of the profession. Dr. Thompson, of Jarrow, and Mr. Furniss, of Castle Eden, though less intimately known to the members of the Society, were not held in less esteem by the inhabitants of the respective localities in which they resided. The Committee take this opportunity of rendering to their memories a last tribute of respect.

Two members, owing to their leaving the neighbourhood, have resigned. The names of three members have been struck off, in consequence of non-payment of subscription. The number of new members is 16, making a total of 104.

The income, including a balance brought forward of £3 5s. 3d., is £54 9s. There has been an expenditure of £46 9s. 5d., leaving a balance of £7 19s. 7d. The unpaid subscriptions amount to £7.

At the beginning of the session, in accordance with instructions received, the Secretary prepared abstracts of the Transactions of the Society, which were forwarded to the three following medical serials: the *Lancet*, *British Medical Journal*, and *Medical Times and Gazette*. These abstracts were noticed by the *Medical Times* alone, and once only by that journal. The two other medical periodicals did not insert the abstracts, although previous correspondence had supported the expectation that they would do so,

PAPERS READ.

- Mr. H. E. ARMSTRONG—1. Embolism of middle cerebral artery.
2. Remarks on a fatal case of enteric fever, with perforation.

Mr. R. T. MANSON—On the appearance of two exhumed bodies.

Mr. CARR—Sub-cutaneous emphysema during child-birth.

Dr. B. BRAMWELL—Notes of a case of suspected poisoning.

Mr. BELL—Notes on a case of malignant osteoid disease.

Mr. T. O. WOOD—On the forcible feeding of the insane.

Dr. EMBLETON—On two cases of Diabetes Mellitus.

Dr. EASTWOOD—Cancer of the brain.

Dr. NEWCOMBE—A needle in the back.

Mr. REDMOND—Encephaloid cancer of kidney.

Dr. BANNING—Case of hydrophobia, with remarks by Dr. HEATH.

Dr. WICKHAM—On hallucinations and delusions.

Dr. PHILIPSON—Notes to two cases of thoracic aneurism.

PATHOLOGICAL SPECIMENS.

Dr. FOSS—Aneurism of aorta.

Dr. PEART—Small intestines after Typhoid Fever.

Dr. BYROM BRAMWELL—1. Heart and pericardium covered with rough coagulated lymph. 2. Heart with small rupture in left ventricular wall. 3. Kidney with dilated pelvis. 4. Aneurism of aorta. 5. Heart with patent foramen ovale, &c., &c. 6. Atrophied heart. 7. Cancerous deposit in liver, pancreas, &c., &c. 8. Intrathoracic cancer.

Dr. PAGE—1. Urinary apparatus after urœmia. 2. Brain and skull after fracture of the latter.

Mr. A. WILSON—1. Portion of fractured femur from paralysed limb. 2. Hydatid cysts expelled from uterus.

Mr. BELL—Specimen of malignant osteoid disease.

Dr. EMBLETON—Two hypertrophied hearts.

Mr. H. E. ARMSTRONG—Large and small intestine after enteric fever.

Mr. JEAFFRESON—True polypus of conjunctiva.

Dr. HUME—1. Encephaloid tumour of femur, with remarks.
2. Horse-shoe kidney.

Dr. HEATH—1. Fracture of 12th dorsal vertebra. 2. Tumour of superior maxilla. 3. Fibrous polypus. 4. Several calculi.
5. A bullet extracted from tibia.

Mr. FIELDEN—Mulberry calculus.

Dr. NEWCOMBE—Gangrenous finger.

Mr. JEAFFRESON—Specimen from case of molar pregnancy.

Dr. PHILIPSON—1. Heart, kidney, and liver after uræmia. 2. Aneurism of aorta. 3. Larynx after laryngotomy, 4. Scrofulous kidney.

Dr. ROBERT LIGHTFOOT—1. Specimens of carious and necrosed bone, 2. Splinters and foreign body from wound, with remarks.

Dr. ARNISON—Encephaloid cancer of humerus.

APPARATUS, &c.

Mr. JEAFFRESON—1. Apparatus for treatment of fractures of the lower extremity. 2. Ophthalmic apparatus.

PATIENTS EXHIBITED.

Dr. L. ARMSTRONG—1. Two cases of compound dislocation of ankle. 2. Double amputation.

Mr. JEAFFRESON—1. Avulsion of the whole iris. 2. Tumour of eyebrow.

Dr. EMBLETON—Patient with locomotor ataxy.

Dr. PAGE—1. Fracture of pelvis. 2. Compound fracture of skull. 3. Hip deformity.

Dr. JONES—Compound fracture of skull.

Mr. HENRY E. ARMSTRONG—1. Syphilitic patient sent to Hospital as a case of small-pox. 2. Case of lepra guttata.

Dr. HEATH—1. Case of reflex paralysis. 2. Subcoracoid dislocation of humerus.

It was proposed by Dr. GIBSON, seconded by Dr. FRAIN, that the report be received, which was carried unanimously.

On the motion of Dr. BURNUP, seconded by Mr. HAWTHORN, it was resolved that Mr. Dodd be re-elected paid Secretary.

The election of officers was then proceeded with, Dr. Burnup and Mr. Hawthorn being appointed scrutineers.

On the motion of Dr. GIBSON, seconded by Mr. T. O. WOOD, it was resolved that a vote of thanks be given to the President and

the Executive for the excellent manner in which they had carried on the business of the year.

The President and Secretary having acknowledged the vote of thanks, the meeting terminated.

The first monthly meeting of the Society was held in the Library of the Infirmary, on Thursday, October 9th, 1873. Dr. Philipson, President, occupied the chair. The attendance of members was good.

The PRESIDENT, before entering on the regular business of the meeting, thanked the members for the honour they had conferred on him by re-electing him President of the Society, and expressed a determination to merit the confidence reposed in him, by promoting, to the best of his ability, the success of the Society during the ensuing session.

The following gentlemen were elected members of the Society :—

Arthur T. Wear, M.R.C.S., Newcastle Dispensary.

George B. Morgan, M.R.C.S., Sunderland.

N. P. Maddison, M.R.C.S., Jarrow.

The following gentleman was proposed for election as a member :

R. H. Murphy, M.B., Westgate Street.

PREVALENT DISEASES OF THE DISTRICT.

Dr. CHARLTON asked if any explanation could be given by the officers of public institutions as to the high rate of mortality in the town. He believed there was little sickness in private practice.

Mr. HARDY had had a severe outbreak of Typhoid Fever in his locality, which he ascribed to water impurity, probably furthered to some extent by over-crowding. He had also met with one (imported) case of Typhus. As yet, no deaths from Typhoid Fever had occurred.

The PRESIDENT inquired if the epidemic was limited in extent; to which Mr. HARDY replied in the negative.

Mr. REDMOND had signed 36 death certificates in Gateshead Dispensary practice, and had had 46 fresh cases of Scarlatina during the month of September. The fever was of the asthenic type. One case was fatal in seventeen hours. Blamed atmospheric miasmata, and gave instances of the spread of the disease by infected clothing.

Dr. NEWCOMBE corroborated the foregoing statements, and also thought the disease was intensified by over-crowding.

Mr. HENRY E. ARMSTRONG reported on the sickness of the Newcastle Dispensary and Fever Hospital during the past six months, and quoted the totals, &c., of the following tables, which were taken as read :—

RETURN OF ZYMOTIC DISEASES, DIARRHOEA, &c., ADMITTED TO THE NEWCASTLE DISPENSARY, 1873.

DISEASES.	MARCH.						APRIL.						MAY.					
	Central District.	Western District.	Eastern District.	Elswick District.	Total Ho. Patients.	Out Patients.	Central District.	Western District.	Eastern District.	Elswick District.	Total Ho. Patients.	Out Patients.	Central District.	Western District.	Eastern District.	Elswick District.	Total Ho. Patients.	Out Patients.
Typhus ...	1	...	1	...	2	...	...	...	3	...	3	...	...	...	...	...	0	...
Enteric Fever ...	...	...	1	...	1	...	...	4	1	...	5	...	...	4	2	1	7	...
Simple Continued Fever	...	...	...	...	0	...	2	...	...	...	2	...	...	...	...	...	0	...
Febricula ...	2	5	1	1	9	...	...	4	1	1	6	...	1	3	7	1	12	...
Scarlatina ...	1	4	4	...	9	...	3	7	6	...	16	...	1	5	14	...	20	...
Relapsing Fever	...	...	...	...	0	...	...	...	...	...	0	...	...	...	...	...	0	...
Measles ...	8	...	...	17	25	...	11	18	17	11	57	...	24	29	21	1	75	...
Pertussis	...	...	...	...	0	...	1	...	4	...	5	...	...	...	...	...	0	...
Diarrhoea	2	1	2	...	5	...	...	...	1	1	2	...	...	...	4	...	4	...
Erysipelas	1	...	1	...	2	...	...	...	1	...	1	...	...	1	...	...	2	...
Diphtheria	1	...	...	...	1	...	2	...	...	...	2	...	...	...	...	...	0	...
Small-pox	...	...	...	...	0	...	...	...	...	1	1	...	...	...	...	...	0	...
Chicken-pox	...	...	...	...	0	...	...	...	1	...	1	...	...	...	...	...	0	...
Total ...	16	10	10	18	54	249	19	33	35	14	101	242	27	42	48	3	120	234

RETURN OF ZYMOTIC DISEASES, DIARRHOEA, &c., ADMITTED TO THE NEWCASTLE DISPENSARY, 1873.

DISEASES.	JUNE.						JULY.						AUGUST.					
	Central District.	Western District.	Eastern District.	Elswick District.	Total Ho. Patients.	Out Patients.	Central District.	Western District.	Eastern District.	Elswick District.	Total Ho. Patients.	Out Patients.	Central District.	Western District.	Eastern District.	Elswick District.	Total Ho. Patients.	Out Patients.
Typhus ..	..	..	..	..	0	..	..	..	..	..	0	..	..	..	..	..	0	..
Enteric Fever ..	..	..	10	..	10	..	7	2	1	..	10	..	1	1	3	2	7	..
Simple Contd. Fever	..	..	..	..	0	..	2	..	..	..	2	..	2	8	..	..	10	..
Febricula ..	2	4	2	1	9	..	2	1	..	1	4	..	3	..	3	1	7	..
Scarlatina ..	8	2	13	..	23	..	13	1	12	1	27	..	12	3	9	1	25	..
Relapsing Fever	..	..	..	..	0	..	..	..	..	..	0	..	..	..	..	..	0	..
Measles ..	2	8	7	3	20	..	8	6	1	..	15	..	..	1	5	..	6	..
Pertussis ..	..	..	..	..	0	..	..	..	..	..	0	..	..	..	..	..	0	..
Diarrhoea ..	3	..	3	..	6	..	6	3	7	..	16	..	5	11	..	4	20	..
Erysipelas ..	1	1	..	..	2	..	..	..	..	..	0	..	..	2	1	..	3	..
Diphtheria ..	..	..	..	..	0	..	..	..	..	..	0	..	..	..	..	..	0	..
Small-pox ..	..	..	..	..	0	..	..	..	..	..	0	..	..	..	..	1	1	..
Chicken-pox	..	..	..	..	0	..	1	..	..	..	1	..	..	..	..	..	0	..
Ague ..	..	..	..	..	0	..	..	..	..	..	0	..	..	..	1	..	1	..
Mumps ..	..	..	..	..	0	..	..	..	..	..	0	..	..	..	1	..	1	..
Total ..	16	15	35	4	70	174	39	13	21	2	75	210	23	26	23	9	81	187

ADMISSIONS TO THE NEWCASTLE FEVER HOSPITAL, 1873.

DISEASES.	March.	April.	May.	June.	July.	Aug.	Sept.	Total.
Small-pox ... ..	...	...	3	...	...	1	...	4
Measles... ..	...	1	...	...	...	...	...	1
Scarlet Fever ... ..	...	2	...	1	...	1	...	4
Typhus... ..	3	1	2	...	...	...	1	7
Enteric Fever	5	3	2	...	1	4	7	22
Relapsing Fever ... ..	...	...	1	...	...	...	...	1
Simple Contd. Fever ... ..	...	...	...	...	...	...	...	...
Febricula ... ..	...	...	...	...	...	...	...	...
Debility	1	...	...	...	1	...	...	2
Obstruction of Bowels ... ..	...	1	...	...	...	...	...	1
Pneumonia ... ..	...	...	1	...	...	...	...	1
Dyspepsia ... ..	...	...	...	...	1	...	...	1
Jaundice ... ..	...	...	...	...	...	1	...	1
Total	9	8	9	1	3	7	8	45
DEATHS.								
Scarlatina ... ..	...	1	1	...	...	...	...	2
Typhus... ..	...	1	1	...	...	...	...	2
Enteric Fever... ..	...	1	...	...	...	...	...	1
Total ... ..	...	3	2	...	...	...	...	5

Dr. GIBB, after congratulating Mr. Armstrong on his recent appointment as Medical Officer of Health to the borough, inquired if the law gave him power to deal with all cases of epidemic disease. Thought it would be well if such were the case.

Mr. ARMSTRONG replied that his power as to the removal of patients was limited, except in the case of public lodging-houses, and where dwellings were unfit for habitation. These statements were corroborated by Mr. Hardy.

Dr. WILTSHIRE spoke as to the defects in sanitary legislation, especially with respect to the appointment of Health Officers, some of whom were under Government control and some not. Thought all officers should be appointed by Local Government Board, if we were to expect united action throughout the country. He also

inquired as to the destruction of infected clothes, and advocated the use of a disinfecting apparatus.

Dr. CHARLTON, in connection with the foregoing, reminded the Society of the case of a medical practitioner in Durham, against whom a legal action was instituted for the removal, in his own carriage, of a small-pox patient.

Dr. HUMBLE spoke of the great want of power to remove cases occurring in Dispensary practice; and advocated the prompt isolation of all sufferers from zymotic disease. A case of Typhus in tenement property was a *nuisance*, and, as such, should be removed. Forty years ago, it was the custom for one of the Fever Hospital officials, who was termed the inspector, to visit the houses of fever cases, for the purpose of disinfection. This had fallen into disuse.

Dr. B. BRAMWELL had experienced the difficulty of thoroughly disinfecting the clothing. People would not destroy clothing worn by the infected. Recommended dry heat as a disinfectant, and spoke in favour of Dr. Ransome's self-regulating apparatus, which he had seen in full working order at Nottingham.

Mr. REDMOND thought the spread of diseases was often due to schools, and to the practice, so common among the poor, of crowding round the patient.

Dr. HUMBLE asked as to the mode of disinfecting clothing at the Newcastle Fever Hospital.

Mr. ARMSTRONG explained that the woollen clothes were subjected to a dry heat by exposure over a furnace. The linen, &c., was boiled in water containing chloride of lime, and afterwards bleached. In reply to the inquiry of Dr. B. Bramwell, as to the temperature employed in the application of dry heat, Mr. Armstrong said that the temperature was always sufficient to boil the water for the baths in the Hospital.

Dr. GIBB related the following case of scarlatinal infection by milk:—He was called, in May last, to a tradesman's daughter, ill of scarlatina. The family had only been settled in Newcastle for two months, and as they had but few acquaintances, and there was no Scarlatina in the street where they lived, the father, a nervous and fidgetty man, was very anxious to know how it could have been introduced into his house. After some inquiry, it was found that their milk was supplied from a dairy at the edge of the Town Moor; that it had always been brought to the house by a young daughter of the dairyman until three weeks before; that then a son of the dairyman had brought it; and a week before the tradesman's daughter was attacked, the dairyman himself had brought it. On investigation, it was found that the whole of the dairyman's family were down with Scarlatina, and one had died.

The dairyman's house was one of two rooms: in the one room was his family, down with Scarlatina, and in the other the milk lay in the pails until delivered. The children of the tradesman were in the habit of having milk to their breakfasts and tea, and the one attacked was the only one who had not in infancy had Scarlatina.

Dr. B. BRAMWELL asked how the milk was conveyed. Might not the conveyer carry the infection also?

Dr. GIBB replied that the milk was left at the door in the ordinary way.

Mr. REDMOND had seen disease contracted by drinking the milk of cows affected with "milk fever."

Dr. WILTSHIRE considered Scarlatina very little infectious in its early stage. In Dr. Gibb's case, it had most likely been conveyed in milk, which appeared capable of absorbing the poison of such a disease, and also of affording a *pabulum* for its development. The epithelium of the convalescents might have fallen into the milk. Advised that all milk should be boiled.

Dr. GIBB had found children unwilling to drink milk that was boiled.

Dr. HUMBLE drew attention to the original topic of discussion—the high mortality—and thought this might be due to an underestimate of the living population. Said that among general medical practitioners there was "very little doing." The town had every facility for thorough drainage; there was less than the usual evidence of over-crowding; therefore, he thought it was reasonable to assume that there was some error in the calculations. Thought it was the duty of the Society to investigate the matter.

Mr. GAMMAGE thought the water might be at fault. In Sunderland, where the water was the best in England, the health was good.

Mr. HENRY E. ARMSTRONG thought the reported high death-rate was probably less due to inaccuracy in the estimated population of Newcastle than was thought by Dr. Humble. The death-rate had not been continuously at the high standard of 40 per 1,000 living, and had recently fallen to a much lower figure. There had been an unmistakeably large amount of sickness in the public practice of the town. The Dispensary returns for the year ending August 30th showed a higher number of admissions than had ever before been recorded, and an increase of 20 per cent. on the admissions of the last four years. This was the more remarkable from the fact that the recently instituted Children's Hospital had been treating two or three thousand cases in the year, which would otherwise have come to the Dispensary.

Dr. FOSS considered that the central position of Newcastle might help to account for the high death-rate.

The PRESIDENT suggested that as the time allowed for the discussion of prevalent diseases had expired, it would be well to continue the subject at next meeting.

A patient under the care of Dr. Heath was then introduced, with congenital malformation of each external ear.

Dr. B. BRAMWELL stated that he had met with a case of transmitted web-foot, congenital in the male branches only, which had once skipped a generation.

Mr. FENNELL said that he was himself web-footed, and that his grandfather had been the same.

Mr. HARDY had recently delivered a patient of a child with six fingers on each hand, and six toes on each foot.

Dr. JONES had had a case of infant webbed in fingers and toes. Its brothers and sisters were the same.

PATHOLOGICAL SPECIMENS.

Dr. ELLIS showed a necrosed portion of the mastoid process after Scarlatina. Dr. Ellis also exhibited a specimen of exudation from intestines, passed three days after labour. The patient did well.

Dr. PHILIPSON, who had examined the last-mentioned specimen, stated that it was composed of exudation corpuscles mixed with epithelium.

NOTES OF A CASE OF EXTRA UTERINE FŒTATION WITH SPECIMEN.

By C. STENNETT REDMOND, L.K.Q.C.P.

MARTHA K., æt. 28 years, admitted an H.P. of the Gateshead Dispensary on September 16th. She complained of debility, loss of appetite, loathing for food, and often vomiting it. Her tongue was pale, white and flabby, and there was a peculiar pasty yellow chlorotic appearance of face. She was nursing a child, seven months old. Did not think herself *enceinte*. I attributed her symptoms to atonic dyspepsia, due to lactation. Told her to wean the child, and ordered a tonic mixture with hydrocyanic acid. Saw her again

on the 19th, when she was about her work, and said she was much better, and would come up and see me as soon as her medicine was done.

On the 22nd, happening to pass by on my rounds about 1 p.m., a messenger met me to say I was to come at once, as she was dying. I found her in the following condition: face pale, lips bloodless, eyes sunk, surface cold and exsanguine, breath cold, tongue cold, pale, flabby—in fact, in a state of general collapse, with indications of the withdrawal of a large quantity of blood from the circulation. *Decubitus very remarkable*, being semiprone and partially on the right side, in the diagonal between the two positions. She was quite sensible, and complained of intense pain in the abdomen. *Pulse* 120, small, weak, and regular. *Heart's action* healthy; *respiration* slow and regular, but shallow; *no sighing*. The abdomen was very distended, and rather tympanic at upper part.

She went to bed, apparently quite well, about eleven o'clock the previous night: woke up about two or three a.m., complaining of cramp in her inside, and desire to vomit. Got out of bed to vomit in a pail, and fell down in a faint. Her husband called assistance and put her into bed, and she came round after a bit, but gradually sunk to the condition in which I found her.

On asking why they had not sent for me the first thing in the morning, I was told that she had been taken with cramps in her inside about a fortnight before, and been very bad for some time, but came all right again, and that they thought she was similarly held this time, and there was no danger.

Of course, I saw the case was hopeless, and gave some hot brandy and water, applied mustard poultices over the heart and abdomen, hot bottles to feet; and covered her over with a warm blanket, and ordered a mixture containing æther, ammonia, and lavender, but she sunk rapidly, and died quietly about two o'clock.

Autopsy twenty-four hours after death; body fairly nourished; abdomen very much distended; no marks of violence or injury. On laying open abdomen, cavity was found full of sero-sanious fluid, mixed with flakes of lymph. Stomach distended to the full with flatus. Tied and removed it, and got all the fluid out with a small cup, to the extent of about five pints. Found a large mass of dark coagula sufficient to fill a pint basin in the right iliac and hypogastric region, close to which I found an ovum (fœcundated), apparently about the seventh or eighth week, extravasated into the abdominal cavity from the distended and ruptured right fallopian tube, which had acted as its abnormal resting place. Removed uterus, and both ovaries, &c., shewn. Uterus was rather larger than normal; os was blocked up with mucus. Made an incision through posterior surface. Lining membrane pale, except a pinkish congested patch on anterior surface of body.

The Great Omentum looked, literally, like a scarlet apron, its vessels being intensely injected and congested.

The following facts bearing upon the case I elicited subsequently from a person who knew the deceased and her habits :—

She had eight children before ; the sixth was stillborn and putrid. She did not think herself in the family way at all, and remarked to Mrs. B. (my informant) on the Saturday previous, in a jocular way, “how stout she was getting about the belly,” and expressed surprise at the reason. Her husband and she both drank, and quarrelled a good deal at times. He had more than once thrashed her. She was a very bad tempered woman ; used not to get drunk, but still was “fond of a drop.” Was washing all day on Thursday, at a passing tub. Was in a public-house till eleven o’clock on Friday and Saturday nights, and till ten o’clock on Sunday night was drinking whisky, but did not get drunk. Was laughing and talking excessively on Sunday night ; was given to immoderate fits of laughter at times. Was sure her husband had not thrashed her lately. Remembered her having an attack of cramps in the bowels about a fortnight ago, and that she was bad all day.

Had I known these facts previously, I should have hesitated to certify without an inquest ; but I communicated them to the police, who, however, did not think there were any grounds of suspicion.

I think it most probable that the extravasation of the ovum would depend remotely on the exertion of passing clothes on Thursday, and proximately on the excited condition in which she appears to have been on the night of the occurrence, although in any case the rupture would not have been long deferred, the usual time of the occurrence being considered by obstetric authorities to be generally about the second or third month in the *tubal* variety.

The large quantity of blood effused from the rupture of a cyst of so small dimensions rather surprised me, but on reference, I find cases recorded where as much as seven, eight, and ten pints have been observed, the foetus being in the second month.

The deciduous membrane is stated to be usually, if not always, formed in the uterus in these cases, just as if foetation were normal, but I am not sufficiently acquainted with the subject to say whether it was so in this case or not.

The filamentous vessels intended to form the placenta are seen surrounding the ovum.

Dr. WILTSHIRE alluded to chance of recovery after treatment at an earlier stage than the case just read. Such cases, left to themselves, generally bled to death. Advocated surgical treatment in some instances, so as to leave the cyst, stitching its walls to the abdominal parietes, and leaving the placenta, with the cord hanging

out at the wound. Disinfecting solutions (Condy's, &c.) should afterwards be injected. The results of such a line of treatment were, on the whole, very good.

Dr. ELLIS spoke of a case of extra-uterine gestation brought some time ago before the Society by Dr. Charlton. This had been left to nature. Went the full time, and the foetus ulcerated through the abdominal wall. The patient eventually did well.

The PRESIDENT confirmed the statement of Dr. Ellis, and said that the case had occurred at or near Wallsend.

Dr. WILTSHIRE did not approve of always leaving such cases to nature. A stone, if left to nature, would no doubt ulcerate its way out of the bladder. The foetus, if left, might seriously affect the bladder, stomach, or other viscera, instead of escaping in front.

Dr. REDMOND said that cases of the *tubal* variety of extra-uterine gestation, such as this had been, generally came too late for treatment, and were usually fatal, the patients not perhaps suspecting themselves to be pregnant at all, as happened in the present instance.

Dr. WILTSHIRE thought cases might be well treated by puncture, when diagnosed early. Arrest of nutrition would follow the escape of liquor amnii. Thought the employment of the aspirator would be advantageous in such cases.

Dr. GIBSON could not look upon the operation of gastrotomy as commonly applicable to cases of extra-uterine pregnancy, in a large number of which the enveloping cyst was ruptured, or the foetus died before the physical conditions were sufficiently developed to admit of exact diagnosis. But where the diagnosis was satisfactory, he regarded the proposed withdrawal of the amniotic fluid by the process of aspiration as a justifiable operation. Still, his feeling was that in a vast majority of cases the patient would do best by being left alone; at least, until the necessity for interference should be demonstrated.

Dr. WILTSHIRE would not, of course, interfere where everything was going on fairly, but would advise operation in case of repeated attacks of peritonitis, and danger to the life of the patient.

The PRESIDENT expressed his sense of the pleasure afforded by the presence of Dr. Wiltshire at the meeting, both from his valuable contributions to the discussion on the prevalent diseases of the district, and from his interesting remarks on the last case.

NORTHUMBERLAND & DURHAM MEDICAL SOCIETY.

THE second monthly meeting was held in the Library of the Infirmary, on Thursday evening, November 13th, 1873. Dr. Philipson, President, occupied the chair. The attendance of members was exceedingly good.

The following gentleman was elected a member of the Society:—

Mr. R. H. Murphy, Westgate Street.

The following gentlemen were proposed as members :—

Mr. J. Tait Budge, Jarrow.

Mr. W. T. Wilson, North Shields.

Mr. A. H. Brownlee, Brandon.

Mr. John Reid, Castle Eden.

Mr. W. A. Wheatley, Durham.

Mr. John W. Bramwell, North Shields.

PREVALENT DISEASES OF THE DISTRICT.

Dr. PHILIPSON alluded to the prolonged discussion at last meeting, and, in connection with the high death-rate in the town, read the following extract from the Registrar-General's report for quarter ending September 30, 1873 :—

It is indisputable that, during the years 1872 and 1873, the death-rate in England and Wales has fallen considerably below the average.

In the three months ending September 30, 1873, the mortality in England and Wales was at the rate of 19·4 deaths annually per 1,000 of the population, or 2 per 1,000 less than the average rate for the ten previous corresponding quarters.

Whereas, in Newcastle, the annual death-rate, last quarter, was 29·9, while at Portsmouth, the rate was 17·5, in Bristol 21·5, and in Sunderland 22·1.

He thought it right to mention these tangible facts as a basis for the discussion of the members.

Dr. CHARLTON had made inquiry as to the particular cause of the high death-rate, but had hitherto failed to find where it existed.

Could not say the returns of the Registrar-General were likely to be inaccurate. Parish and other surgeons had not had much sickness to account for it. He would like to hear the opinions of others, especially the officers of Public Institutions.

Mr. REDMOND had had Scarlatina for two or three months in Gateshead. The mortality was not high. He had had 32 fresh cases during the past month, with 7 deaths. The death-rate, in September, had been high from chronic cases.

Dr. DAVIS (Wrekenton) corroborated the remarks of Mr. Redmond.

Dr. ARNISON asked if the mortality in Gateshead was as high as in Newcastle.

Dr. NEWCOMBE thought the average was the same.

Dr. WILLIAMSON asked for the ages of the fatal cases. Thought the death-rate had lately been increased by the deaths of more than the average of old persons.

The following reports were read by Mr. TENNANT :—

Return of Admissions of Zymotic Diseases to the Newcastle Dispensary during the month of September, 1873.

Diseases.	Central District.	Western District.	Eastern District.	Elswick District.	Total.	Out Patients.
Typhus .....	...	...	...	...	...	...
Enteric Fever	2	...	9	1	12	...
Febricula	3	6	2	3	14	...
Scarlatina	4	14	20	13	51	...
Relapsing Fever .....	...	...	...	...	...	...
Measles	1	...	2	...	3	...
Pertussis .....	...	...	...	...	...	...
Diarrhoea	2	1	9	2	14	...
Erysipelas	1	1	1	1	4	...
Total zymotic cases ...	13	22	43	20	98	...
Total admissions for } Home Patients..... }	48	56	85	38	227	154
DEATHS.						
Enteric Fever	1	1	1	1	4	...
Scarlatina	3	...	2	2	7	...
Diarrhoea	2	...	1	1	4	...
Erysipelas .....	...	...	...	...	...	...
Total from all diseases	13	5	18	8	44	...

LOCALITY OF ZYMOTIC DISEASES FOR SEPTEMBER.

The most prevalent Zymotic disease during September has been Scarlatina.

In the Central district, cases occurred in Stowell Street, Prudhoe Street, Friars, and Rosemary Lane.

In the Western district, Mr. Wilson reports cases from Thornton Street, Pitt Street, Duke Street, Buckingham Street, Back George Street, Peel Street, Mansfield Street, and Bailey Street.

In the Elswick district, cases from Elswick East Terrace, Sycamore Street, Tyne Street, Alexander Street, Panmure Street, and Noble Street.

In the Eastern district, Mr. Wear reports cases from Manor Chare, Dog-bank, Silver Street, Melbourne Street, New Road, Blagdon Street, Byker Buildings, and Vine Lane.

Return of Admissions of Zymotic Diseases to the Newcastle Dispensary during the month of October, 1873.

Diseases.	Central District.	Western District.	Eastern District.	Elswick District.	Total.	Out Patients.
Typhus	1	...	...	...	1	...
Enteric Fever	1	2	2	2	7	...
Febricula	5	4	2	3	14	...
Scarlatina	22	16	10	10	58	...
Relapsing Fever .....	...	...	...	...	...	...
Measles .....	...	...	...	...	...	...
Pertussis .....	...	...	...	...	...	...
Diarrhoea .....	...	4	3	1	8	...
Erysipelas	4	...	5	...	9	...
Total zymotic cases ...	33	26	22	16	97	...
Total admissions for } Home Patients..... }	87	65	96	39	287	160
DEATHS.						
Enteric Fever .....	...	1	...	...	1	...
Scarlatina	2	4	2	4	12	...
Diarrhoea	1	1	...	...	2	...
Erysipelas	1	1	...	...	2	...
Total from all diseases	12	14	14	8	48	...

LOCALITY OF ZYMOTIC DISEASES FOR OCTOBER.

The most prevalent Zymotic disease during October has been Scarlatina.

In the Central district, cases were furnished by Liverpool Street, Percy Court, Stowell Street, Friars, Monk Street, Clayton Street, Rosemary Lane, and Black Gate.

In the Western district, Mr. Wilson reports cases from Diana Street, Blandford Street, Temple Street, Tindal Street, Buckingham Street, and Spring Street.

In the Elswick district, cases from Sycamore Street, Back Hinde Street, and Noble Street.

In the Eastern district, Mr. Wear reports cases from New Road, Grenville Terrace, Sandgate, Miller's Hill, Byker Bank, Gardner's Buildings, and Pottery Lane.

Mr. H. E. ARMSTRONG read the following return of admissions to the Newcastle Fever Hospital during the month of October, 1873:—

					Cases.			Deaths.
Enteric Fever	...	...	...	...	5	...	...	1
Typhus	...	...	...	...	1	...	...	...
Scarlet Fever	...	...	...	...	3	...	...	...
					<hr/> 9			<hr/> 1

Dr. DENHAM had met with fever in South Shields. The returns were above the average. Dr. Gwynn Harries, the Government Inspector, had, he was sorry to say, succumbed to Scarlet Fever, contracted in the discharge of his duty in the North of England.

Dr. EASTWOOD thought it would be advisable for the officers of Public Institutions to compare notes, and learn if the relative mortality of Scarlatina was higher than the general mortality. Thought the death-rate due to close streets, over-crowding, &c.

Mr. JEAFFRESON observed that no doubt an explanation of the death-rate would interest the public as well as the members of the Society. Thought it an opportunity for the Society to make use of itself, by the investigation and report of a committee appointed for the purpose.

Dr. ARNISON considered there was much over-crowding, and that this was due to the enormous house-rents. Four shillings a week was the sum usually charged for two small rooms. In Birmingham, and elsewhere, this sum would procure a small house, with yard or garden space. Blamed also the vicious system of house-building, which had been characterised as the "Two-door" style of architecture, consisting of two tenements in each house, containing two or three rooms each, and these well-rooms, where thorough ventilation was impossible.

Mr. JEAFFRESON moved, "That a committee be appointed to investigate and report on the high death-rate."

Dr. EASTWOOD seconded, and proposed Dr. Charlton as chairman, and Messrs. H. E. Armstrong and Tennant as members, along with the officers of the Society.—Carried.

Mr. H. E. ARMSTRONG read extracts from the Public Health Act for 1872, in explanation to the inquiry of Dr. Gibb at last meeting of the Society.

PATHOLOGICAL SPECIMENS.

Dr. CHARLTON's specimen: disease of supra-renal capsules. Wm. Leighton, æt. 40, admitted to the Infirmary on May 29th, a ship-chandler, living at Tynemouth. A badly-nourished man, of a

peculiar yellowish-brown colour. Complains of great pain in back over the sacrum, but subsequently of pain in all parts of his body, and calls out directly he is touched. Has a most offensive fœcal smell; occasionally vomiting; bowels very slow; conjunctivæ white and pearly; tongue dry and brown; breath very foetid. The discolouration of the skin was first noticed by his friends last September, and he has continued to get darker and thinner since then. The scrotum is very dark indeed, almost black; the umbilicus and nipples also being very dark. Very little history can be obtained from his relations as to the manner in which his illness came on. He has been much neglected of late, his wife having run away from him. Since his admission, he has been delirious, taking little nourishment of any sort. Pulse 104, very weak and feeble. Temp. 101°2. R Pot. Bromid gr. viii.; Pot. Iod. gr. iv.; Aqua ℥i.; t. d. s. From May 29th to June 2nd there was very little change either in appearance or symptoms, and on June 2nd he died, much exhausted. *Post mortem* examination: The body is much emaciated and discoloured, the discolouration not being quite so well marked as before death, the face, umbilicus, and scrotum being very dark, especially the latter. On opening the thorax, a large number of old adhesions were found at the apices of both lungs. Numberless small cavities and a quantity of tubercular deposits of considerable standing. The abdominal viscera being all apparently healthy, the kidneys of rather a large size, but the *supra-renal capsules* were discovered to be twice the normal size, and on making a section, pus exuded. One of the capsules (the right) was more the shape of a kidney than the so-called cocked-hat shape.

Dr. NEWCOMBE asked if the blood of Dr. Charlton's patient had been examined.

Dr. CHARLTON replied in the negative.

Dr. EMBLETON inquired as to the precise nature of the disease in the capsules.

Dr. CHARLTON said, the kidneys, on examination, were found to contain scrofulous matter and some pus. The muscles of the body were much shrunk.

Dr. GIBB showed a bristle about two inches in length, which he had extracted from a patient's toe. There had been at first a fistulous opening, as though from diseased bone, for which Dr. Gibb searched with a probe, but found the bone healthy. On withdrawing the probe, the end of the bristle was seen projecting from the wound, and was extracted. The wound healed in three or four days. The bristle had probably been got from the felt lining of the patient's slipper.

Dr. GIBB also exhibited a finger torn off by machinery. The tendons of the forearm had given way at their origin, and were drawn through the wound in the finger, remaining attached to the part torn off.

Dr. BYROM BRAMWELL said: These organs, Mr. President, were removed from the body of a woman who died two days after delivery. The history of the case was this. The patient had always been a delicate, ailing subject. When sixteen years of age, she had a severe attack of inflammation of the bowels. When seventeen, she married. For the first eighteen years of her married life she had no serious illness, but was a constant sufferer from severe bilious attacks and headaches. During this period she gave birth to six children. In July, 1871, she left this country for India, being three months pregnant. She suffered from sea-sickness during the whole voyage, and before arriving at her destination she miscarried. She had not been long in India before she was attacked with intermittent fever. She continued in a very delicate, weakly state until May, 1872, when she gave birth to her seventh child. This effort of parturition seems to have given the death-blow to her constitution. She made a very bad recovery. From May, 1872, to March, 1873, she was constantly ill. During this short period she twice had Asiatic cholera, twice heart apoplexy, once acute dysentery complicated with hepatic ulcers. The abscess, she told me, burst and discharged itself through the intestine. On her arrival in this country, in May, 1873, she was in an advanced state of uræmia. The skin of her face and hands had that clear, smooth, transparent, ivory-like appearance which has been described by Dr. Addison as so characteristic of fatty degeneration of the liver. The liver was considerably enlarged, and tender to the touch. The spleen was also somewhat enlarged. She was still suffering from ague. She was again pregnant; the pregnancy had advanced to the third month; the urine was slightly albuminous. Under the change of climate and appropriate treatment she improved somewhat. The ague left her. Towards the end of September dropsy set in; the œdema first appeared in the face, but soon affected the lower extremities, and finally the abdomen and chest. The urine now was copiously albuminous, of high specific gravity, and loaded with fatty casts. Labour pains commenced on October 19th. I saw her about eight a.m. The os was then the size of a shilling, the presentation a head, the pains, which were so slight as hardly to be felt at the os, occurred irregularly at intervals of from fifteen to twenty minutes. The temperature of the vagina was 100·6; the pulse 115, very weak. She continued in much the same condition all day. At 6·30 the os was rather more dilated; the temperature of the vagina was now 101·7; the pulse 144. Sickness now set in, followed by

great prostration; the pulse became almost imperceptible; the pains left her. Under these circumstances, my father agreed with me that the best thing to be done was to deliver her as soon as possible. Four drachms of the liquid extract of ergot were administered in divided doses, and she was delivered by turning. The operation was speedily and satisfactorily performed. The placenta came away soon afterwards, and there was, fortunately, little hæmorrhage. The shock of the operation told dreadfully upon her. She lay for some time in a dead faint; indeed, we thought she would die there and then. She rallied, however, somewhat, and continued for two days, complaining now and then of the pain in the right flank. Fifty-eight hours after delivery, she said she felt the ague coming back again. Took a rigor, and died soon afterwards. The *post mortem* was made thirty hours after death. Putrefaction had already set in. On opening the abdomen, the liver was found enlarged, very much softened, and very friable. The capsule was easily stripped off the organ; in places, it was separated from the hepatic substance by vessels of gas. How much, therefore, of the condition of the organ was due to the disease, and how much to putrefaction, it is impossible to say. The spleen was enlarged to about twice its natural size; the kidneys were enlarged, especially the left, which was fully twice the normal size. The substance of the kidney was very pale and friable; the capsule was easily separated. In the cellular tissue, about the right kidney, there was considerable congestion; the kidney itself was somewhat injected, and in this respect formed a marked contrast with the left. The heart was very pale and flabby; patches of commencing atherema are to be seen on the mitral valve and upon the first part of the aorta. Under the microscope, the muscular structure is seen to be in an advanced state of fatty degeneration; the uterus presents nothing abnormal; the laceration corresponding to the site of the placenta is well-marked. I have entered, Mr. President, somewhat minutely into the history of this case; but I hope the Society will excuse me, for deaths in midwifery practice are rare, and it is important, especially so at the present time, when the relative mortality in private and hospital practice is engaging so much attention, that in a case like this, where important viscera lesions are present, that they and not the process of parturition should have the blame.

The next two cases which I have to show you are well-marked specimens of stenosis of the mitral valve; both of them present some interesting peculiarities. This heart I removed from the body of a woman, æt. 63, who died suddenly soon after getting out of bed. I did not see her during life, and so am unable to tell you what was the nature of the physical signs which were present. On inquiring, I ascertained that she had suffered from heart-disease

for at least eight years; that five years before her death she had an attack of apoplexy, which left her paralysed in her left arm and leg; that for the last three years of her life she had dragged on a motionless and painless existence; and that she had not during this period required medical advice. On opening the thorax, we found the left lung almost entirely collapsed and adherent to the ribs by a dense band of cartilaginous-like tissue. The right lung was very voluminous and hypertrophied; the mitral orifice was very much contracted; the segments considerably thickened, adherent at their edges, and projecting as a rigid cone into the ventricular cavity. The left auricle was considerably dilated, but the dilatation was nothing when compared with the dilatation of the right auricle, which was enormous. The right ventricle was somewhat hypertrophied; the pulmonary valves were thickened, but quite competent. The aortic valve was also diseased; the segments were adherent at their edges; the orifice was considerably contracted, and the valve was also incompetent. The liver was cirrhotic; the kidneys healthy. The right ventricle of the brain was very much dilated, and lined by thick membrane. The points of interest in this case were—first, the fact that there was no dropsy; second, its long duration, mitral stenosis being, as you are aware, as a rule, a progressive lesion, and generally of short duration, dropsy being almost always present so soon as the right side becomes affected.

In the next specimen, the contraction of the mitral orifice is even better marked than in the one I have just shown to you. This was the heart of a man, *æt.* 46, who for thirteen years had suffered from heart-disease. He was an inmate of the Tynemouth Union Workhouse. He had frequent attacks of severe pulmonary congestion and bronchitis, attended with great dyspnoea. The cardiac action under these attacks was very irregular, both in time and volume. These attacks were most amenable to treatment, being always speedily subdued by the use of *digitalis*. After the attack passed off, he used to go about his work, apparently quite well. In August last, he was attacked with the usual symptoms, but this time *digitalis* had not its usual good effect. The patient, knowing the benefit which he always derived from the medicine, took more than the prescribed quantity. The result was the relief of the pulmonary symptoms and of the dyspnoea, but the manifestation of poisonous symptoms, vomiting and remarkable slowness of pulse. The pulse continued never more than 36 per minute for a period of nine days. At the end of a month, the patient was so far recovered as to think himself quite well. He returned to his usual occupation, oakum picking, but next morning was again admitted to the hospital, worse than ever. Dropsy of the face, feet, and abdomen was present to a considerable degree; there was intense pulmonary congestion, and considerable dulness over

the left base posteriorly. Treatment this time had no effect upon the symptoms ; he rapidly got worse, and died about three weeks after the date of his last admission. After death, we found the heart extensively diseased ; there was most marked contraction of the mitral orifice ; a well-marked ante-mortem clot entirely filled the left auricular appendage ; the interior of this clot was quite soft, and of a pale yellow colour, almost white. This clot had evidently formed two months previously, when the heart's action was so remarkably shown under the use of digitalis. The æortic valves in this case were also diseased ; both lungs were very much congested ; and portions of the leg tissue were here and there consolidated, and of a red colour. The kidneys were typical examples of the small contracted granular form of Bright's disease, and contrast well with the large white kidneys I have already shown to you.

Mr. JEAFFRESON exhibited a specimen of malignant disease of Humerus ; also strumous disease of Tarsus ; also a diseased Knee-joint.

Dr. CHARLTON showed a case of rounded perforating ulcer of the stomach. The patient, a girl, who was deaf, had come to the Infirmary ten days ago, when the case was diagnosed as one of peritonitis. The girl died. At the *post mortem* examination, there was found on the anterior wall of the stomach a perforation which explained the peritonitis. The ulcer had edges more than usually thickened.

Dr. CHARLTON, speaking of cases of ulceration, characterised the effect of perforation as sometimes tremendous, the patient falling and dying, as if in an apoplectic fit. Perforation often occurred after meals. In the present case, perforation probably took place after admission.

Mr. REDMOND showed specimens of malignant disease of the stomach and pancreas. The patient had been under observation for twelve months, and died last week. On opening the abdomen, the parts were found matted together. The lesser curvature of the stomach was an inch thick, and the pancreas a mass of scirrhus infiltration.

Dr. NEWCOMBE, in the absence of Dr. Heath, described a specimen of diseased knee, for which Dr. Heath amputated the leg two days ago, from a man aged 27. The case was one of malignant osteoid disease, beginning in the head of the tibia. The limb was raised before amputation, and compressed with an elastic bandage. About two ounces of blood were lost—altogether venous. The success of the operation was, so far, perfect.

Dr. ARNISON showed the cancers of diseased Femur and Tibia, for

which he had performed excision of the knee joint. There had been erosion of the cartilages, the disease also involving the bones. The operation was done only three days ago, and could not yet be judged of.

Dr. PHILIPSON exhibited the kidneys, liver, and spleen from a case of Uræmia. The patient, a labourer, aged 42, and who had been off work seven days, was admitted into the Newcastle Infirmary on October 9th, 1873, and was then suffering from general dropsy, anasarca, and ascites. The urine was highly albuminous; sp. gr. 1010, and contained granular and clear hyaline casts of the uriniferous tubules, the latter being in predominance. The case was regarded as one of chronic Bright's disease, in the second stage of the degenerated form. On November 5th, symptoms of uræmic intoxication began to manifest themselves, gastric disturbance, with obstinate vomiting, and diarrhoea replacing the dropsical effusions. Delirium and coma preceded the fatal termination, which occurred on November 10th. At the *post mortem* examination, the kidneys were found to be both large, pale, mottled, and granularly degenerated, the capsules being firmly adherent. The liver was very firmly adherent to the abdominal wall, stomach, and colon, and when removed was found to be very irregular on the surface, presenting deep depressions, so as to give the appearance of irregular lobulation. The depressions resembled cicatrices of a golden or radiated form. On section, the tissue was found to be much condensed, granular, and here and there studded with yellowish-white nodules, of a rounded form and dried appearance, with a yellowish-brown spot near the centre, which appeared to correspond with an obstructed bile duct. Under the microscope, oil globules, granules, cells larded with fat, and fibres of connective tissue were seen. The specimen was regarded as one of syphilitic hepatitis, or Hepatitis Gummosa. The nodules resembled, in structural characters, the nodes which are met with in the subcutaneous areolar tissue, in cases of constitutional Syphilis.

Dr. PHILIPSON also presented the kidneys from a second case of Uræmia. The patient, a young man, aged 20, was admitted into the Newcastle Infirmary on October 9th, 1873, under Dr. Arnison, having been sent in from the country, upon the supposition that he was suffering from calculus vesicæ. After having been carefully sounded by Dr. Arnison, no stone was detected; he was transferred to the medical ward, and came under the care of Dr. Philipson. The urine was albuminous; sp. gr. 1011; and under the microscope, exhibited a large quantity of pus, granular and hyaline casts of the uriniferous tubules, some of the casts having pus corpuscles adherent, and kidney epithelium. The case was

regarded as one of chronic pyelitis. On November 7th, he began to be troubled with vomiting, delirium, which passed into coma. At no time had there been any dropsy. He died on November 10th. At the autopsy, the kidneys were found to present the characters of scrofulous inflammation (strumous pyelitis). The secreting structure of the right kidney was completely destroyed, the organ presenting large cavities, filled with softened decayed tuberculous matter. The left kidney was partially destroyed. The bladder contained no calculus. Dr. Philipson remarked that the chief interest of the case was the absence of dropsy with such extensive destruction of the kidney parenchyma.

Dr. REOCH exhibited a Heart, with recent pericarditis.

CASE OF POST PHARYNGEAL ABSCESS.

By E. CHARLTON, M.D.

J. R., æt. 38, was admitted to the Infirmary March 14th, 1873. He was then suffering from pain at the top of larynx and about the back of the fauces. He remained in the hospital for nearly seven weeks, complaining always of severe suffering about the top of the chest and the larynx. He had much fever and frequent rigors. Pulse was 100 to 110; temperature 101 to 102. He was repeatedly examined with the laryngoscope, &c., but no disease could be detected. After most severe sufferings, he died, with symptoms of exhaustion. On examination, an abscess was found extending along the left side of the œsophagus from the fauces down to the cardiac orifice of the stomach. Towards its lower extremity it seemed to be somewhat enlarged, and it contained probably a teacupful of bright green pus. The back of the fauces had always been examined in the exact position, and it is possible that at the time he came into the hospital the matter had made its way down below the reach of the finger. We never could detect the usual boggy feeling that is found in post pharyngeal abscesses. It is probable that this abscess had existed long prior to his entering the hospital.

Mr. JEAFFRESON asked as to the supposed origin of the abscess. Was it from disease of the spinal column, or from foreign body—as, for example, a fish bone?

Dr. CHARLTON had no reason to suppose there was special cause to account for the abscess.

A COMPLICATED CASE OF LABOUR.

By F. W. NEWCOMBE, M.D.

MRS. R., aged 38; had four children and one miscarriage, and always quick labours. Sent for me on June 22nd, 1873, in a great hurry, about one a.m. I arrived at her house a few minutes after receiving the notice, and found both feet born. The pains were very strong and quick, and the foetus small. There was some obstruction to the descent of the head, and on examining, I found the head of a second child, low down in the pelvis, in advance of the first. I endeavoured to push the heads up, and so liberate the first one, but the pains were so strong, and the uterus so powerfully contracted, that I found it impossible, so sent for my friend, Dr. Barkus, to bring the craniotomy instruments. We found we could get a finger into the mouth of the first child, which was dead from pressure on the chord, and managed to introduce the perforator through it into the base of the skull, after which, by using some traction, we brought the head down. The second child was born a few minutes after, alive, and the mother made a good recovery. It does not often happen that both bags of water rupture before a birth takes place. I only find five cases recorded, in none of which was it found necessary to perform craniotomy.

Dr. GIBSON asked why Dr. Newcombe thought there were two bags of water. There was generally only one bag, one placenta, and two cords in such cases

Dr. Newcombe could not say whether there were two or one. There were two placentaë.

ON A RARE FORM OF OBSTRUCTED LABOUR.

By CHARLES GIBSON, M.D.

AFTER a pregnancy, which was believed to be unusually prolonged, labour came on, in a primiparous lady, in a manner which, at first, was regarded by the experienced accoucheur in attendance upon her, as strictly natural. The recurring paroxysms of lumbar pain gradually increased in intensity, and, in the course of time, became associated with distinct, although slight, bearing down efforts. The pains so constituted continued in an irregular and fitful manner for many days, without affecting any appreciable advance towards the completion of labour, and without producing serious prostration in the condition of the patient. Repeated vaginal examinations were instituted; but no foetal presentation could be made out. A large rounded tumour was found at the

upper portion of the vagina: nothing more. The case was surrounded with obscurity and doubt, and, as a matter of course, excited great anxiety in the minds of every one connected with it. Under these circumstances, my attendance was requested.

In the history of the case, the cessation of the catemenial discharges, the gradual enlargement of the abdomen, the quickening, the subsequent movements in the abdominal tumour, and other matters, were those which belonged to ordinary conception and pregnancy; and the manifestations of parturition were at first those which belong to normal labour.

In examining this patient, it was of the first importance to be assured of the existence and of the life of a foetus in utero. These objects were easily accomplished by palpation and auscultation. Palpation of the abdomen showed that it contained a tumour which had, in form, size, position, all the characteristics of a fully developed gravid uterus, and the stethoscope elicited unmistakeable evidence of vigorous foetal life within. By vaginal examinations, a remarkable absence of the usual emollient mucus of advanced parturition was the first fact noticed. The bony pelvis was well-formed. The vagina itself was capacious, and was occupied at its upper part by a projecting, large, rounded tumour, which was firm, and resistant upon pressure, and into which the vaginal walls could be traced perfectly in all its circumference. The tumour—evidently the intra-vaginal segment of the gravid uterus—was carefully examined over every part of its surface while pains were present, and while the parts were unaffected by parturient contractions. It was noticed that the intra-vaginal segment became slightly more tense during a pain, and that it descended a little towards the perineum. But no os uteri could be found, and no cervix. A loose portion of tissue could, however, be felt at the most depending part of the tumour, which might be made to glide to and fro over the firmer structure beneath; and, in the centre of this loose tissue, a sort of small digital fossa was found, with a well-defined hard margin—presumably the remains of the internal os uteri, which had become occluded. The teguments of the intra-vaginal tumour, moreover, could be made to move slightly upon a hard rounded body within in the absence of a uterine contraction, but no amount of pressure exerted upon the tumour could make it recede towards the centre of the uterus. This hard rounded body was undoubtedly the head of the foetus.

The unaided completion of labour under the circumstances related, without rupture of the uterus, was impossible. The necessity for the formation of an artificial orifice was clearly indicated. The operation itself was performed by the agency of a guarded bistoury with a probe point; and a turbid liquor amnii to

the extent of a few ounces escaped from the interior of the uterus on the completion of the incision. And now a little time was allowed for the parturient efforts to effect enlargement of the newly-formed os uteri. These efforts indeed became more and more pronounced ; but it was soon manifest that completion of the process of delivery, without further help, could not be depended upon. The artificial orifice was enlarged by lateral incisions ; and a little time again allowed for self-delivery. Still the advance of the presenting part (the cranium in its most usual position) was slowly and very imperfectly made. The orifice of the uterus, however, in the course of time became enlarged sufficiently to admit of the passage of the foetal head, and, consequently, for the application of the midwifery forceps. These instruments were very satisfactorily applied, and the recurring natural parturient efforts were aided by gentle but firm traction upon the cranium of the foetus. The labour now steadily advanced, and in fifteen or twenty minutes a fine, fully-developed living child was born. The placenta followed in the usual course ; and the uterus contracted to the size of a cocoa nut, behind and above the symphysis pubis. The patient soon afterwards passed into a sound sleep, from which she awoke thoroughly refreshed and apparently well.

Reports of cases of occlusion of the os uteri are to be found in the literature both of this country and elsewhere. Nevertheless, the occurrence of such cases in connection with parturition is a thing of exceeding rarity and of extraordinary interest. A very few instances only have been reported in this country ; and it certainly does not occur more frequently than once in many millions of cases of labour. The case known as Dr. Smellie's did not occur in Dr. Smellie's practice, but is copied by him into his book on midwifery, published in 1779, from a report in the *Edinburgh Medical Essays*, by a Dr. Simpson, Professor of Medicine in the University of St. Andrew's. In this case, after two or three days of labour, the sides of the os tincae were found grown together. "The cicatrix of the grown together parts" was divided by an incision half-an-inch deep. The finger was passed into the uterus, and the whole circumference of the passage was felt to be hard like cartilage. Several incisions were now made into the cartilaginous ring. There was no bleeding from this procedure ; but the labour still did not make satisfactory progress, and the child was removed by craniotomy. The woman died twenty-four hours after delivery. In Mr. Tomkins' case (reported in the *Lancet* for 1832), the patient was a farmer's wife in her second labour. The pains were active, and at length excruciating. The os uteri was completely closed by firm adhesion. The hardened circular edge of the original os uteri could be distinctly traced, and the space within

the circle was filled with an extremely firm and tough substance, which, however, felt thinner than the surrounding substance of the uterus. When the pain came on, the head of the foetus was pressed forcibly upon the lower part of the uterus. In this case, an incision was made through the adherent substance within the circle of the original os uteri, to the extent of half-an-inch or more; pain instantly succeeded, and the new os uteri dilated in a perfectly circular manner; but so soon as the os was fully dilated, the pains became very slight and inefficient. Ergot was exhibited, but was of no avail, and delivery was effected by the vectis. The uterus contracted well after the removal of the placenta, and the patient recovered without an unpleasant symptom. It is not stated whether the child was saved or not. Dr. R. W. Wright reports a case in the *Medical Gazette* for 1846. This occurred in a stout Irish woman in her second labour. The pains of labour were urgent and powerful, and bore down a round tense globular tumour into the vagina. No os uteri could be discovered, but about the spot where it should have been, a firm, hard tissue was found, with three ridges diverging from it like cicatrices. Opiates were given by the mouth and by the rectum "to quiet the strong and frequent pains till further aid could be had, or nature perform her own cure." After having been almost stopped by opiates, the pains returned with their former frequency and strength, and were accompanied, eventually, by very violent bearing down. The opiates were repeated, but rupture of the uterus took place at the site of the central cicatrix. The rent was made larger and larger by each succeeding pain, and as it enlarged, three rents were developed from it in the direction of the three lines of cicatrices. The membranes afterwards burst, and the head not advancing, the delivery of a healthy child was effected by the forceps. The placenta was readily extracted. There was no hæmorrhage throughout, and the patient's convalescence was satisfactory. Dr. Fogarty's case is reported in the *Lancet* for 1856. The accident occurred also in a second pregnancy in this case. There were no pains and no discharge during the first eight months of pregnancy. At the expiration of this period, however, premature labour was threatened. Pains occurred which were "strong and forcing." But there was no vaginal discharge. The patient was again threatened a week afterwards, and on the completion of nine months of utero-gestation, pains again set in—becoming hourly stronger. There was not, however, any vaginal discharge. On the following day, the pains were "regular and forcing," and the head advanced into the pelvis. The os uteri could not be found. On the third day, the pains were "regular and forcing," and the head was further advanced. Examination now found, at the normal site of the os uteri, a glistening, irregular,

pearly, patch—not distinctly a cicatrix. Incisions were made through this to the extent of about four inches anteriorly and posteriorly, and then the case was left to nature. Labour terminated three hours afterwards in the birth of a full-sized living boy. This patient never had a bad symptom. Two other cases, referred to in the *Obstetrical Journal* for October, have occurred very recently: one is reported in the German “Gynecological Archives.” In this case, an artificial os uteri was made; and the child was extracted by the forceps. The mother recovered, but the child was still-born. The second case occurred almost in our own neighbourhood, but the patient was allowed to die undelivered. In this case, a *post mortem* examination showed that delivery might have been easily effected.

The etiology of our subject is involved in the utmost obscurity. In the case just now reported for the first time, there was no evidence, from the commencement of pregnancy to the time of parturition, of the occurrence of inflammatory, or indeed of any other diseased action, in the uterus. It is, of course, impossible for conception to take place without a portal of ingress for the spermatic fluid, and in this case menstruation took place regularly and easily up to the time of conception. Dr. Tyler Smith reports a case in which the os uteri was occluded after a natural labour, during the process of involution of the uterus. Cases have come under my own observation, from time to time, wherein the canal of the cervix has become so small as to admit the finest sound with difficulty; and the cervix itself in some women is very small indeed. Can it be that inflammatory action is set up by the very conditions of pregnancy in some women? or established by mechanical injuries in copulation?—inflammatory action so silent in its character as not to yield local or general evidence of its existence. The younger Nægele, Ashwell, and others, suppose that the occlusion is effected by the formation of a peculiar false membrane; but if this formation does sometimes take place, its occurrence, I would submit, still involves the necessity for inflammatory action; and in considering Dr. Tyler Smith’s case, we must bear in mind that rupture of the cervix uteri and abrasion of its surface are really not uncommon incidents in parturition: while it is easy to suppose—in the absence of accurate knowledge—that herein the process of healing has somewhat transcended the ordinary course, and that the abraded or ruptured parts have been brought together and sealed by the effusion of organizable lymph.

In the case now reported, I was informed that the pregnancy had endured ten months; and I must confess that I think the statement is supported by probability. The process of parturition was set agoing with the greatest difficulty. The initiatory stages of labour effected nothing; there was no os to

dilate ; no centre upon which the parturient effort could be brought to bear, and the gestation might have been prolonged, without a doubt, if artificial aid had not been employed. It is, moreover, noteworthy that almost no lubricating mucus was thrown out into the vaginal or vulval passages, during the whole course of the case.

In order to avoid wounding the uterine arteries, it has been recommended that incisions of the os uteri, in such cases as those under consideration, should be made at various points around its circumference. In the case now reported it will be noted that the incisions were made laterally. This was done, first, because no uterine arteries could be felt pulsating in the locality, and secondly, and most particularly, because if the artificial opening should have become excessively developed, there would have been little risk of injuring the bladder or the rectum by it.

Possibly, after the formation of the artificial os uteri, the parturient throes might have been equal to the completion of the labour, aided or not, as they might have been, by the exhibition of ergot, or by the application of manual power to the fundus or body of the uterus ; but the patient had been already many days in labour (twelve or eighteen) ; the child was still living, and the application of the forceps gave precision to the course, and control of the progress, of the labour.

The operative proceedings were almost bloodless ones ; and the patient was saved from much of the mental and bodily suffering, otherwise attendant upon the proceedings adopted, by the inhalation of chloroform.

The PRESIDENT complimented Dr. Gibson on his valuable paper, and the successful result of this remarkable case.

Mr. ADAM WILSON asked as to the size of the opening made by Dr. Gibson.

Dr. GIBSON said the incision first made was half an inch long. After a few pains, this was increased to the extent of half an inch on each side. The pains did the rest.

NORTHUMBERLAND & DURHAM MEDICAL SOCIETY.

THE third monthly meeting of the Society was held in the Library of the Infirmary, on Thursday evening, December 11th, 1873. Dr. Philipson, President, in the chair. There was a large attendance of members.

The PRESIDENT introduced Dr. Ralfe, of London, to the meeting.

The following gentlemen were elected members of the Society:—

Mr. A. H. Brownlee, Brandon.
Mr. J. Tait Budge, Jarrow.
Mr. John W. Bramwell, North Shields.
Mr. John Reid, Castle Eden.
Mr. W. A. Wheatley, Durham.
Mr. W. T. Wilson, North Shields.

The following gentlemen were proposed for election:—

W. H. Dixon, M.D., Sunderland.
Mr. Edward W. Forster, Cullercoats.
Mr. William Gowans, South Shields.
Mr. T. F. Hopwood, Sunderland.
Mr. Edward George Levinge.
R. Ayre Smith, M.D., Sunderland.
Mr. Ralph Young, Newcastle.

The SECRETARY read the following report of the Special Committee:—

REPORT

OF THE COMMITTEE, APPOINTED TO INQUIRE INTO THE
CAUSES OF THE HIGH DEATH-RATE, IN THE BOROUGH
OF NEWCASTLE-UPON-TYNE.

THE committee carefully considered the weekly returns of deaths, published by the authority of the Registrar-General, and found that during the four months, from July 5th to November 8th, 1873, the annual rate of mortality per 1,000, was highest in the week ending September 6th, being 40; that of the other weeks, the rate varied from 38 to 22; and that the average of the eighteen weeks was 30.

That deaths from Scarlet Fever occurred every week ; that during the eighteen weeks, 134 deaths were registered from Scarlet Fever ; and that in the week ending October 18th, 22 deaths were registered from Scarlet Fever, the largest number in any one week of the four months.

That deaths from Diarrhœa occurred every week ; that during the eighteen weeks, 191 deaths were registered from Diarrhœa ; and that in the week ending August 16th, 28 deaths were registered from Diarrhœa, the largest number in any one week of the four months.

The committee were kindly favoured with the returns of the Newcastle Dispensary, for the months of September and October, by Mr. Tennant, the resident Medical Officer, and noted that in the month of September, out of 227 new cases, there were 98 cases of Zymotic disease. Of the Zymotic cases, there were 51 cases of Scarlet Fever, with 7 deaths ; 14 cases of Diarrhœa, with 4 deaths ; and 12 cases of Enteric Fever, with 4 deaths. That in the month of October, out of 287 new cases, there were 97 cases of Zymotic disease. Of the Zymotic cases, there were 58 cases of Scarlet Fever, with 12 deaths ; 8 cases of Diarrhœa, with 2 deaths ; 7 cases of Enteric Fever, with 1 death ; and 9 cases of Erysipelas, with 2 deaths.

The Committee, through the kindness of the Sanitary Authority of the Borough of Newcastle-upon-Tyne, were allowed to examine the map statistics and tables of mortality, prepared by the Medical Officer of Health of the Borough of Newcastle, and observed, that the number of deaths in the various districts of the entire borough of Newcastle, from Scarlet Fever and Enteric Fever, during the five months, from July 12th to November 15th, 1873, was thus stated :—

That from Scarlet Fever, 10 deaths occurred in the district of St. Nicholas and St. John ; 37 in the district of All Saints ; 17 in the district of St. Andrew ; 78 in the Westgate district ; and 26 in the Byker district ; making a total of 168.

That from Enteric Fever, 5 deaths occurred in the district of St. Nicholas and St. John ; 6 in the district of All Saints ; 4 in the district of St. Andrew ; 12 in the Westgate district, and 3 in the Byker district ; making a total of 30.

It is apparent, therefore, that in the borough of Newcastle-upon-Tyne, during the months of July, August, September, and October, Diarrhœa has been fatally prevalent, Scarlet Fever epidemically prevailing, and Enteric or Typhoid Fever more common than usual.

In the investigation, facts were tendered in support of the view, that much of the general sickness of the town was due to breathing vitiated air, and drinking unwholesome water, such conditions

impairing health and increasing the susceptibility to the influence of the poison of the fevers or other infectious diseases.

It was considered that in addition to the air of habitations becoming vitiated, the atmosphere of the town was polluted, the pollution being the result of the evolution of muriatic acid and other gases. The local Acts were thought to be imperfectly operative, for two reasons—first, because they allow too great a percentage of gas to be evolved; and, secondly, because they extend only to certain manufactories, which emit certain gases.

The vitiation of the air of habitations was regarded as the consequence of over-crowding, from immigration and high rents; insufficient renewal of air, from the arrangement and construction of the rooms being faulty; the passage of impure air into a room from the basement; defective ventilation of water closets; and the want of proper privy accommodation and refuse bins, conditions which of themselves ensured filthiness.

Of other causes, the following were deemed the most important, viz., the inefficient ventilation of the main sewers, especially at the more elevated parts of the town; the unsanitary way in which the ground is prepared, in certain places, for building purposes; and the condition of the streets, both as to the irregularity and incompleteness of the scavenging, and the time that streets were allowed to remain unpaved after the houses had been occupied.

Concerning the foundation of houses, it was stated, that it was by no means uncommon for the excavations left in quarrying stone and in digging clay for bricks, to be filled up with refuse material, various in character, which in time underwent a process of decomposition or fermentation, with the generation of gases, which readily permeated the basement, and so found access to the habitation.

In addition to the main sewers being supplied with vent holes and charcoal filters, it was thought that if they were connected with the high chimneys of the manufactories, the injurious gases might thus be safely dispersed.

As to the water supplied to the inhabitants of the town by the Newcastle and Gateshead Water Company, evidence was received of the water being imperfectly filtered. The retention of organic matter in potable water being looked upon as highly prejudicial to health.

Having special reference to the present epidemic of Scarlet Fever, great stress was laid on the following rules, with the object of preventing the spread of the disease:—

I. The institution of preventive measures at the outset.

II. The segregation of those affected.

Where perfect isolation is not able to be provided, the patient should be removed to the Hospital provided by the authorities, with the least possible delay.

III. That when Scarlet Fever is present in a household, no child of the household should be permitted to go to school or other place of public resort.

IV. That no individual who has suffered from Scarlet Fever should be allowed to mix with the community until disinfection shall have been effected.

The statistics upon which this report is founded, with the exception of those from the Newcastle Dispensary, refer solely to the mortality. The report, therefore, in the absence of a system of registration of disease, to a certain extent, is limited. For if a scheme of registration of disease had been still in operation, in addition to the mortality of the present epidemic of Scarlet Fever being estimated, the fatality and the vital effect of the outbreak could have been computed.

(Signed) G. H. PHILIPSON, M.D., PRESIDENT,
AND CHAIRMAN OF THE COMMITTEE.

HENRY E. ARMSTRONG,

HONORARY SECRETARY.

Mr. HENRY E. ARMSTRONG stated that, in conjunction with Mr. H. W. Newton, and Mr. Pattinson, Borough Analyst, he was at present engaged on an inspection of the water supply of the Borough. The Hallington, Whittle Dene, Benwell, Fenham, and Carrs Hill reservoirs had already been examined, and samples of the water of each taken for analysis. The water in the town itself yet remained to be examined. In due time a report on the water would be presented to the Sanitary Authority.

Dr. CHARLTON considered that the ideas embodied in the report would be generally accepted. Doubtless, social changes resulting from increased wealth would affect the public health. Intemperance, a result of high wages, was probably an important factor in the mortality.

Dr. HUMBLE observed that a recent report to the Town Council showed the water to be pure as regards organic matter. As one of the evil results of increased wages had been alluded to, he thought it to be only fair to the working classes to state his knowledge on the other side of the question, which was that during last year an excess over the previous year of £48,000 had been paid into the Savings' Bank.

Dr. RALFE stated that since his coming to Newcastle he had been engaged in considering the condition of the working people in the district. He had found the high rate of mortality generally associated with drunkenness. Had visited several of the alkali, lead, and other works of the Tyne where this was the case. With respect to water-pollution, he dwelt on the need of distinguishing between fossil organic matter and albumenised ammonia in solution.

Dr. LUKE ARMSTRONG spoke of the pollution of water in cisterns. The waste pipe of cistern was generally trapped ; but the water in the trap did not escape, and was poisonous. He spoke of spread of contagion by schools. The officer of the School Board had, in a case under his observation, insisted on a child going to school whilst other members of the family were suffering from Scarlatina. Thought the Society would do a public service in requesting the School Board to attend to this matter.

Mr. HAWTHORN agreed with the last remarks, but thought the officer of the School Board should not be responsible.

Dr. EMBLETON recommended that the waste pipes of cisterns should terminate outside the houses. With regard to the School Board question, he thought the Medical Officer of Health should be informed of such cases.

Dr. LEGGAT corroborated the recommendation of Dr. Embleton.

Dr. RALFE said that in London the waste pipe generally went to the sewer.

Dr. GIBSON said water for house water-closet should be obtained from a separate cistern.

Dr. PHILIPSON asked Dr. Williamson to give his experience of the effects of alkali works on the health of the workmen.

Dr. WILLIAMSON said sulphurous and nitrous acids were injurious when inhaled largely ; in small portions, popularly thought to be *beneficial* to health. Muzzles protected the respiratory organs from muriatic acid gas as long as forty years—even when the teeth were levelled with the gums. Never knew a fatal case from the effects of muriatic acid gas. Emphysema and bronchitis occurred. The men did not complain of the muriatic gas, but they *did* of sulphurous and nitrous acids. A new plan of manufacturing alkali would soon be generally adopted, by causing the sulphur to unite directly with the pyrites. South Shields was seldom affected by zymotic disease, and when it had been, the cause was probably its nearness to Newcastle. (Laughter.)

Dr. EMBLETON moved that the report be adopted and printed in the Transactions.

Dr. CHARLTON seconded the motion.—Carried unanimously.

Dr. GIBSON asked if the report were final.

Dr. ARNISON asked if any action would follow the report, and proposed that the report be handed to the Sanitary Authority.

Dr. HUMBLE seconded the motion, and asked if copies should not be sent to the newspapers for publication.

Dr. ARNISON moved that a copy of the report, signed by the President and Secretary, be sent to the Mayor and each of the members of the Council and to each of the newspapers.

Seconded by Dr. EMBLETON, and carried unanimously.

PATHOLOGICAL SPECIMENS.

Dr. ARNISON exhibited a specimen of malignant disease of the humerus. The patient, a girl of 16, first suffered from swelling of the shaft of the humerus—not yielding to iodide of potassium. She had severe pain in the nocturnal exacerbations, for a time relieved by subcutaneous incision. The limb was afterwards amputated. The case did not terminate well, the patient sinking from exhaustion in less than a month.

Dr. BYROM BRAMWELL showed—1. A Heart with Fungoid Vegetations on the Aortic Valves. He said, this specimen, Mr. President, is a beautiful example of fungoid vegetations on the aortic valves. I removed it from the body of a man *æt.* 46, who was admitted into the Tyemouth Union Workhouse about six weeks ago, complaining of cough, shortness of breath, and great debility. He told me that he had always enjoyed good health, never having been laid up in bed for a single day until his present illness commenced. A week before his admission, he took some furniture out to Whitley; he was a street porter by occupation, and, like most of his class, a hard drinker; on his way to Whitley he got wet through, and remained in his wet things all day; the next day he was “all of a tremble;” was pained from head to foot; the pains, however, being greatest in the knees and ankles; began to cough, felt short of breath, and thoroughly done up. He rapidly got worse, and at the end of the week was admitted to the Workhouse Hospital. He was then in an extreme state of debility, the slightest exertion was too much for him, he had a frequent, short, dry cough, was very short of breath, there was slight *œdema* of the feet, he was very pale in the face, the lips markedly anemic, the conjunctivæ very white and pearly. On auscultation, I ascertained that there was a double bellows murmur at the base, heard also over the course of the aorta and great vessels. The systolic portion of the murmur was much louder than the diastolic. There was no mitral murmur. The cardiac dulness was not increased. For the first fortnight after his admission he improved somewhat; the *œdema* of the feet disappeared, and he was able to sit up for the greater part of the day. Towards the end of November he got worse, and died suddenly, on the 29th day of that month. Two days before his

death, my brother and myself, with a view to perfect our powers of diagnosis, each independently made a careful examination of the case. The physical signs were now quite different. The systolic aortic murmur had disappeared ; the first sound at the base had a dull, booming character, but not loud ; the second sound was accented, harsh, and prolonged into a murmur, best heard over the fourth left costal cartilage, very indistinctly over the second right cartilage, and not propagated along the course of the aorta and great vessels. There was now a well marked systolic murmur at the apex, and the cardiac dulness was considerably increased. There was visible jerking collapsing pulsation in the carotoids. The radial pulse was 104, weak, regular, and presenting, though only in a faint degree, that jerking collapsing character which is so characteristic of aortic regurgitation. The man, as I have said, died suddenly. The *post mortem* was made 18 hours after death. The pericardium contained a small amount of serum ; the heart was large ; all its cavities were filled with black coagulated blood ; the mitral orifice was somewhat dilated. The aortic valve was extensively diseased ; all three segments of the valve were thickly coated with fungoid vegetations, which, when seen from below, projected through the opening like a cauliflower, and seemed completely to fill the orifice. Two of the segments of the valve are ulcerated through, and the valve itself is incompetent. This case is interesting. 1st. Because of the marked change in the physical signs ; the disappearance of the well-marked aortic systolic murmur ; the appearance towards the termination of the case of a mitral systolic murmur. 2nd. Because of the peculiar position of the aortic diastolic murmur, best heard over the fourth left costal cartilage, very indistinctly over the second right costal cartilage, and not propagated along the course of the aorta and great vessels. The important diagnostic points in this case were : The pallor, the absence of oedema, the peculiar character of the pulse, the great debility, and, they told us that, although the mitral murmur was very much the most distinct, yet the aortic lesion was the important feature of the case. Dr. Byrom Bramwell added that Dr. Ralfe had just pointed out to him that that the sinuses of Valsalva were greatly dilated, and that this specimen was almost identical with one which was shown to the Pathological Society in London last session ; a plate of the specimen is published in the Transactions of that society.

2nd. Aneurism of the Thoracic Aorta. Dr. Bramwell said : The next specimen which I have to show you, Mr. President, is an interesting example of aneurism of the thoracic aorta. I first saw the patient from whom I removed this mass in April of the present year. He was 36 years of age, a block and mast maker by occupation, but had served eight years with the 54th Regiment in

India ; latterly he had been employed as a "striker." While in India, he was laid up for a month with acute dysentery. Ten years ago, he contracted a chancre, a single sore which was three weeks in healing, but which was not followed by secondary symptoms. With these exceptions, he had enjoyed excellent health until two years ago, when he began to suffer from pain over the region of the liver, pain in the right breast, pain in the back, flatulence, and indigestion. For at least three years, however, he had been short of breath when he went upstairs or climbed a hill. Eight weeks before I saw him, he first noticed a lump projecting from his breast, but for some months he had remarked that his chest was swollen. When I first saw him his condition was as follows :—A tumour the size of a large orange projected from the anterior thoracic wall on a level with the nipple, but more to the right than the left side. The tumour was conical in shape, the base of the cone extending on the left side as far as the middle line of the sternum, on the right side as far as the right nipple. The tumour had a well marked rounded apex, the skin over the apex was blue and discoloured. The consistency of the tumour was soft except at the upper and outer side of the base, its contents were fluid, and it seemed as if the fluid was only separated from the finger by the skin. Well marked pulsations could be seen and felt in the tumour, and all over the anterior thoracic wall to the left of the mass, indeed the whole anterior thoracic seemed to move *en masse*; the pulsation was most marked in the 6th and 7th ribs in the line of the left nipple. Pulsation could also be seen in the epigastrium to the right side. There was great increase of dullness over the heart and aorta. On auscultation at the apex, the first sound was prolonged into a dull roll, the second sound was dull but well defined. At the manubrium sterni a loud double bellows murmur was heard, before the diastolic portion of the murmur there was a distinct thud. Round the upper and outer portion of the base of the tumour, the heart sounds had the same character as at the manubrium ; over the tumour itself and in the pit of the epigastrium, the sounds were heard very superficial, dull, muffled, and valvular in character and free from murmur. A forcible impulse was communicated to the ear through the stethoscope. Postering the second sound was heard all over the back, most accentuated over the vertebra prominens, and between this and the right scapula. The patient complained of pain up the right side of the chest and over the liver, pain over the spine at the level of the 6th dorsal vertebra. The pulse was 80, visible jerking with a distinct thrill, the right radial was considerably stronger than the left. There was no difference in the size of the pupils. The respirations numbered 34 ; he complained of a tickling in the throat which caused him to cough. The tongue was foul,

appetite bad, bowels very costive; he was much troubled with flatulence and indigestion. The liver dulness was considerably increased, and he complained of pain when pressure was made over this organ. The urine was slightly albuminous. Such was his condition when I first saw him. The after progress of the case was short. The tumour daily increased in size until it was fully the size of a boy's head, the base extended from nipple to nipple. It one day ruptured when the unfortunate patient was smoking his pipe in bed; death was instantaneous. You will see that the aneurism springs from the very base of the aorta. It has first formed a large cavity beneath the sternum, extending downwards as far as the diaphragm, it has then burst through the thoracic wall by two large openings, the lower one was filled up with a firm clot, the upper one was free, and you will notice how smooth and blood-worn are its edges. It next formed a large external tumour fully the size of the boy's head, you see here the margin of the base. The pericardium is firmly adherent throughout. The aortic valves are thickened, stretched, and incompetent. There is no disease of the mitral orifice. The right heart, by its outer wall, is in close proximity with the aneurism, in fact the heart itself forms one boundary of the internal sack. The liver and kidneys were large and congested, the other viscera were healthy. This specimen, in some of its general features, very closely resembles a case of aneurism of the aorta, which was brought before this society by Dr. Philipson last session. In that case, as in this, the patient was a soldier, and had served for some years in India, had had a chancre, had an adherent pericardium, and, if I remember rightly, there was in that case, as in this, no history of pericarditis, nothing to shew whether the pericarditis was anterior or posterior to the formation of the aneurism.

Dr. RALFE alluded to a case of disappearance of a musical murmur, formerly under the care of Dr. Charlton at the Newcastle Infirmary, which had not long ago come under his notice. The man had had slight hemiplegia, probably caused by the removal of the projection causing the murmur.

Dr. HEATH introduced two patients, of whom one was a boy upon whom an operation had been performed for the removal of a fibrous polypus growing from the basilar process. Dr. Heath said, this case presented some interesting peculiarities. The growth springing by one attachment from the basilar process or body of sphenoid, had thrown out two separate masses, one of which keeping in the naso-pharyngeal space, had gradually filled it up, and become visible as a round surface, just appearing below the veil of the palate; the other, pressing in an outward direction, had forced its way round the right pterygoid process internal to the

ramus of the lower jaw, and become visible on the cheek below the malar bone. These two growths, however, had not taken place with equal rapidity, and had not, therefore, shown themselves with equal completeness at the same time, that on the cheek having been more apparent at first, afterwards that in the throat. From this, it occurred that two incomplete operations were performed previous to that of which he now showed the result. By the first, performed some two years ago by a gentleman in the country, the external growth on the cheek was removed. A few months after this operation, the boy came to the Infirmary, exhibiting the large rounded mass in the throat, a slight scar on the cheek, but no tumour here. The polypus in the throat was removed, as described in the Transactions of the Society, in part by the *écraseur*, the operation being completed by a lithotrite. The polypus, as large as an orange, with peduncle as thick as a third finger, was shown at one of the spring meetings. Some time afterwards the patient again appeared at the Infirmary, this time with an external tumour on the cheek, something like a large fig, having the feel of a fibrous growth, and, apparently, deep attachments. Nothing could at this time be perceived in the throat, but the finger passed well up into the naso-pharyngeal space detected an irregular but not large mass, which seemed to project towards the posterior nares. The history of the case, as well as the physical appearances, rendered it probable that these were parts of the same growth. The removal of the whole by one operation being determined upon, and chloroform having been administered, a preliminary incision was made over the tumour in the cheek in order to ascertain positively what direction the deep root of the tumour followed. This was found to be backwards towards the sphenomaxillary fissure, and internal to the ramus of the lower jaw. It was evident that a somewhat serious operation would have to be performed, in order to free the deep attachment of this external portion, and also to clear thoroughly the naso-pharyngeal space and effectually detach the pedicle of the whole growth from the basilar process. A variety of operations have been performed with this object, the bony palate has been split, and portions of it removed to open up a road to the roof of the naso-pharyngeal space. The upper jaw has been taken away bodily, or shunted forward and returned, its soft attachments not having been removed, and in other cases transverse incisions across the bone have been practised, or triangular portions removed. In the present case, it was thought most desirable to preserve the floor of the orbit the alveolar processes and the bony palate. The upper jaw bone was, therefore, divided through the antrum and malar tuberosity, and a sufficient opening to admit of the attachments of the growth being reached. These were in

part separated by a gouge, and the growth afterwards torn away by the finger. There was very little bleeding, but the parts involved were touched with the actual cautery. The patient has made an uninterrupted recovery ; the marks of the operation are disappearing, and the face, which was a little drawn, is assuming a natural appearance.

The second patient shown by Dr. Heath was a man, exhibiting a quantity of cholesterine crystals in the anterior chamber of the left eye. Dr. Heath said this patient had suffered from chronic retinitis and irido-choroditis, and had cataract with contracted pupil, and adhesion of iris to the capsule of the lens. It was not, however, on account of these conditions that the case was brought before the Society, but to show the members the crystals of cholesterine in the anterior chamber. These crystals had a tendency to adhere to the cornea in a flattish mass, and when so placed, might be easily mistaken for a metallic deposit on the surface of the cornea ; when looked at, however, by means of lateral illumination the peculiar appearance of cholesterine crystals was easily seen. When the head was moved sharply too, the crystals detached themselves and floated loose in the anterior chamber. Cholesterine crystals were not unfrequently seen in the vitreous in various morbid states, but he had only once or twice before met with them in the anterior chamber.

Dr. MORDEY DOUGLAS showed a tongue removed for cancer by the galvanic *écraseur*. He said : Mr. President, the specimen I have to show you is an example of epithelial cancer of the tongue. The patient, Captain Baker, aged 56, has been a very healthy man. During the eight years I have been his medical adviser he has twice consulted me for slight dyspepsia, and it was on the first occasion I noticed a peculiar appearance of his tongue. The epithelium on the dorsum, from the tip to an inch and a half backwards, was greatly hypertrophied, presented a dead-white appearance, and conveyed the idea that it could be easily peeled off. Captain Baker then told me that in 1848 a jagged tooth wounded his tongue, and that the ulcer so caused did not heal for eight years, during which time it was occasionally touched with nitrate of silver. I have, at intervals of a few months, availed myself of any opportunity to examine the tongue, and observed no difference until the patient called upon me on September 15th, when he stated that two months previously a small ulcer appeared on his tongue, near to the spot where it was injured twenty-five years ago. It was then a small oval ulcer, about the third of an inch long, situate on the left side, about an inch from the tip, and unattended by induration, severe pain, or enlargement of glands. Although it was ascertained that the patient's mother died of

cancer of the uterus, the diagnosis was doubtful; I, therefore, ordered him anti-syphilitic remedies, and applied weak nitric acid lotion to the ulcer. Four or five days afterwards, the lotion was again applied to the ulcer, the front part of which had become clean. Again, in a few days, the front of the ulcer presented the same clean appearance, but the posterior part showed no disposition to do so, and continued to extend backwards by a fissure. As in about three weeks the ulcer had become indurated, and was still extending, the suspicion of cancer seemed only to require the confirmation of the microscope. My friend, Dr. Wiltshire, of London, happening to visit me on the 8th October, saw the case, and at once, with his characteristic acuteness, expressed the opinion that I had epithelioma to deal with. As Captain Baker's steamer was voyaging to London every few days, at my request, he consulted Sir James Paget on October 25th. In a note to me, Sir James advised the removal of the tongue, he having no doubt as to the nature of the disease. Up to the date of the operation, November 9th, the neighbouring glands remained unaffected, but the ulcer had considerably enlarged, and was then attended with rather severe pain, extending to the ear and forehead, yet the nature of the case could not be decided without a knowledge of the treatment under which the patient had been, and the fact that one so distinguished in such matters as Sir James Paget had, after microscopic examination, pronounced that he was "sure" it was cancer. Indeed, so able a surgeon as Dr. Hopgood leaned to the opinion that it was syphilitic, until I told him the history of the case. As the wire of the *écraseur* broke once, I may as well briefly describe the operation, so that a similar accident may be guarded against in future. The patient being seated in a large easy chair, and completely under the influence of chloroform; the tongue was drawn out by a double ligature passed through it an inch from the tip. A large, strong needle was next made to transfix the tongue from side to side, and as far back as possible. The loop of the galvanic *écraseur* wire was then passed over the dorsum of the tongue, beyond the needle, and retained in this position by the fore fingers until the wire had obtained firm hold of the structures within its grasp, the end of the instrument being at the same time pushed well up under the organ. At this stage, the galvanic current was made complete, and the platinum wire having given indications that it was burning animal matter, the *écraseur* was slowly worked. After a few turns of the screw, the wire broke, apparently from strain against the needle. The loop of wire was now passed over the tongue, with its convexity to the right side, whilst the point of the *écraseur* was with difficulty got beyond the needle on the opposite side. The difficulty experienced by surgeons in removing the entire organ, or even of a large

portion of it, has caused them, in order to facilitate the operation, to split the lower jaw at the symphysis, to open the floor of the mouth, or to enlarge the mouth as far as the angle of the jaw, and at one stage of the operation I was afraid recourse would have to be had to the last procedure. In consequence of the tongue stretching when firm traction was made by the ligature through it, the organ could not be sufficiently drawn out, and it was only by aid of the needle which transfixed it that the tongue was, as it were, lifted up by the roots and dragged forward. But for the needle, the cheek must have been opened. A single turn of the *écraseur* screw was made every minute and a half. Twenty turns (half an hour) sufficed to remove the tongue, without the loss of a dozen drops of blood. The patient was kept under chloroform the whole time, and he experienced no pain whatever during the operation. For four or five days he took by the mouth little else than beef-tea and white of egg in water; milk seemed to annoy by sticking to the floor of the mouth. Nutrient enemata were regularly administered until he was able to take enough food by the mouth. By the end of a fortnight, all the slough had come away from the floor of the mouth, and in less than three weeks the patient went out for a short walk. It is not yet five weeks since the operation was done, and as Captain Baker is here for inspection, I need not tell you how well he looks. Many of you have already examined his mouth with interest, and have been surprised at the distinctness with which he can already speak. I am not aware of any case where so much of the tongue has been removed, without the operator having either cut the cheek, divided the jaw, or opened the floor of the mouth; and not being compelled to resort to such severe measures was a great advantage, the severity and danger of the operation being greatly lessened. The case is, therefore, principally interesting as an example of how much of the tongue can be removed in this way, and I have brought the patient with me to Newcastle, so that you might see that, practically speaking, the entire organ is removed. On looking into the mouth, its floor appears continuous to just in front of the epiglottis, and it is only by passing the finger down the throat that the presence of a small portion of the dorsum of the tongue can be detected. It can be rarely necessary to remove more of the tongue than has been done in this case, and the operation would be greatly facilitated if the end of the *écraseur* were curved so as to allow of its being passed into the mouth by the side of the tongue. Not only does the galvanic *écraseur* prevent bleeding in an admirable manner, but its use is attended by another advantage—the heat destroys the tissues for a considerable distance beyond the line of immediate separation, and thereby removes structures which in some cases might be infected with cancer cells. The patient has

made a good recovery, never having had a bad symptom ; he is free from pain, and thoroughly satisfied at having undergone the operation.

PREVALENT DISEASES OF THE DISTRICT.

The following returns from the Newcastle Dispensary and the Newcastle Fever Hospital were taken as read :—

Return of Admissions of Zymotic Diseases to the Newcastle Dispensary during the month of November, 1873.

Diseases.	Central District.	Western District.	Eastern District.	Elswick District.	Total.	Out Patients.
Typhus .....	...	...	...	...	...	...
Enteric Fever .....	...	4	1	1	6	...
Febricula	3	12	5	2	22	...
Scarlatina	12	45	15	8	80	...
Relapsing Fever .....	...	...	...	...	...	...
Measles .....	...	...	4	...	4	...
Pertussis .....	...	...	...	...	...	...
Diarrhoea	2	2	2	1	7	...
Erysipelas	3	...	5	...	8	...
Total zymotic cases ...	20	63	32	12	127	...
Total admissions for } Home Patients..... }	69	103	91	43	306	119
DEATHS.						
Enteric Fever .....	...	...	...	...	...	...
Scarlatina	2	5	4	...	11	...
Diarrhoea .....	...	...	...	...	...	...
Erysipelas .....	...	...	...	...	...	...
Total from all diseases	11	10	16	1	38	...

Mr. HENRY E. ARMSTRONG furnished the following list of cases admitted to, and deaths at, the Newcastle Fever Hospital, during the month of November, 1873 :—

	Admissions.				Deaths.	
Enteric Fever	2	...	1
Scarlatina	5	...	2
Typhus	2	...	...
Febricula	1	...	...
Inflammatory Sore Throat	1	...	...
	11				3	

NORTHUMBERLAND & DURHAM MEDICAL SOCIETY.

THE fourth monthly meeting of the Society was held in the Library of the Infirmary, on Thursday evening, January 8th, 1874. Dr. Philipson, President, in the chair. The attendance of members was good.

The following gentlemen were elected members of the Society:—

Dr. W. H. Dixon, Sunderland.
Mr. Edward W. Forster, Cullercoats.
Mr. William Gowans, South Shields.
Mr. T. F. Hopwood, Sunderland.
Mr. Edward George Levinge, Coxlodge.
Dr. R. Ayre Smith, Sunderland.
Mr. Ralph Young, Newcastle.

The following gentlemen were proposed for election :—

Mr. George W. Crowe, Hartlepool Hospital.
Dr. Mackay, Crook.
Mr. Berry, Barnard Castle.

PREVALENT DISEASES OF THE DISTRICT.

The SECRETARY read the following letters from the Town Clerk, and Mr. D. D. Main, Secretary to the Newcastle and Gateshead Water Company, addressed to Dr. Philipson, the President of the Society:—

Town Hall, Newcastle-on-Tyne, 27th December, 1873.

DEAR SIR,—I have to acknowledge the receipt of the report of the Northumberland and Durham Medical Society, over which you preside, on the

subject of the causes of the high death-rate in Newcastle, transmitted to the different members of the Sanitary Authority of the Borough.

This report has been considered by the Sanitary Authority, and I am instructed to request some further information on a subject all-important to the inhabitants of the Borough, and within the province of the Local Authority.

In this report, it is observed that in the investigation referred to "facts were tendered in support of the view that much of the general sickness of the town was due to breathing vitiated air, and drinking unwholesome water." It is presumed that the word "tendered" must be read as descriptive of statements accepted by the Society as accurate, and so published on their authority.

This being so, I am respectfully to request that the "facts" on which the Society have proceeded, and on which their very grave statement rests, be submitted to the Sanitary Authority, in order that it may receive the careful and earnest consideration which the importance of the subject demands.

In the report of the Society many other points requiring attention are adverted to, some as suggestions, others as statements made to the Society. It would be tedious, and certainly unnecessary, to repeat these allegations, as they are already before the Society. Due consideration will be given by the Sanitary Authority to all of them.

As the Society have collected facts and received statements on these matters, I have to ask the Society to furnish the Board with all the evidence and information of every description that your Society has collected, in order that the Sanitary Authority may be enabled thoroughly to investigate and consider them. Any suggestions the Society have to offer will also be anxiously considered.

I am, dear sir, your obedient servant,

R. P. PHILIPSON, Town Clerk.

G. H. Philipson, Esq., M.D.,

President of the Northumberland and Durham Medical Society.

Newcastle and Gateshead Water Company,

Offices, 6, Market Street, Newcastle-on-Tyne,

January 3rd, 1874.

SIR,—The attention of the Board of Directors has been called to some statements of a very damaging character, reflecting on the water supply of Newcastle-on-Tyne, made in a report on the causes of the high death-rate prevailing in the Borough, and signed by yourself as President of the Northumberland and Durham Medical Society.

The period in question referred to in the report (see page 4, line 13) extends from July 12 to November 15, 1873, and embraces the months (page 4, lines 24, 25) of July, August, September, and October. It is stated that "in the investigation facts were tendered in support of the view that much of the general sickness of the town was due to breathing vitiated air, and drinking *unwholesome water*, such conditions impairing health and increasing the susceptibility to the influence of the poison of the fevers or other infectious diseases." The water drunk by the inhabitants of Newcastle being almost without exception supplied by this company, the conclusion necessarily follows that these serious effects have, after investigation, been proved to have arisen from the water supplied by this company. That this is the meaning of the report is made clearer by a sentence on page 5 in the following terms:—"As to the water supplied to the inhabitants of the town by the Newcastle and Gateshead Water Company, evidence was received of the water being imperfectly filtered, the

retention of organic matter in potable water being looked upon as highly prejudicial to health."

The Directors have, in the first place, to state that they have followed the practice adopted in most of the towns, such as Glasgow and Manchester, supplied by gravitation works, in not filtering the water so collected at all, the disadvantage following filtration being in the opinion of those best able to judge greater than its benefits. With reference to the mischievous character of animal organic matter, the Directors are fully aware that its presence in any perceptible quantity, and especially when produced by recent sewage contamination, is highly injurious to health. The mode and district of collection of the water supplied by this company would in itself form a complete answer, in their opinion, to the possibility of such contamination existing, even were it not strongly confirmed by Mr. Pattinson's monthly analyses, taken as a check upon the company by the Corporation, which, unless they be deceptive and untrustworthy, could not, either as to animal or vegetable organic matter, to an appreciable extent, come out in the form they do. To these analyses, as contained for the months of July, August, September, and October, in the Town Council Proceedings, the Directors respectfully refer you.

As, however, it is stated in the report that, "after investigation," facts had been tendered in support of the view already propounded as to the water supply, and the Directors being fully aware that so serious a charge would not have been made against a public company but after the most careful inquiry, I am instructed to ask that you will, in justice to themselves and their shareholders, furnish them with a copy of the evidence on which this conclusion has been arrived at. It will no doubt be in your possession in the form of analysis, and microscopic examination and other forms of careful investigation now so thoroughly understood by the medical profession to be applicable to such cases.

You will clearly see that in making this request the Directors are only asking common justice, and that a charge of this kind, made so publicly, cannot be treated by them otherwise than with the weighty and serious attention it deserves.

I am, sir, your obedient servant,

D. D. MAIN, Secretary.

To G. H. Philipson, Esq., M.D.,

President of the Northumberland and Durham Medical Society.

The PRESIDENT stated that these were all the written communications which he had received in reference to the report, but that, in addition, Mr. Todd, the Inspector under the Alkali Act for the Tyne district, had called upon him, and expressed his gratification that attention had been called to the pollution of the atmosphere by muriatic acid and other gases, and applied for copies of the report, with the object of forwarding them to Dr. Angus Smith, and other gentlemen, who are at present engaged in obtaining information, upon which a bill will be prepared for the extension of the Alkali Act, which it is hoped will receive the assent of Parliament during the forthcoming session, and will prove beneficial in preserving the health of the community.

On the proposal of Dr. GIBSON, seconded by Dr. EASTWOOD, it was unanimously resolved that the letters be referred to the committee of the Society.

The SECRETARY read from Mr. Tennant the following
*Return of Admissions of Zymotic Diseases to the Newcastle Dispensary during
the month of December, 1873.*

Diseases.	Central District.	Western District.	Eastern District.	Elswick District.	Total.	Out Patients.
Typhus .....	...	...	...	...	...	...
Enteric Fever .....	...	...	1	...	1	...
Febricula	2	2	7	...	11	...
Scarlatina	20	24	15	5	64	...
Relapsing Fever.....	...	...	...	...	...	...
Measles .....	...	...	8	...	8	...
Pertussis .....	...	...	1	...	1	...
Diarrhoea	1	...	2	1	4	...
Erysipelas	1	...	4	1	6	...
Total Zymotic cases ...	24	26	38	7	95	...
Total admissions for } Home Patients..... }	76	58	96	38	268	138
DEATHS.						
Enteric Fever	1	...	...	...	1	...
Scarlatina.....	1	6	6	...	13	...
Diarrhoea .....	...	1	...	...	1	...
Erysipelas .....	...	...	...	...	...	...
Total from all diseases	7	11	17	...	35	...

LOCALITY OF ZYMOTIC DISEASES FOR DECEMBER.

The most prevalent Zymotic disease during December has been Scarlatina.

In the Central district, cases occurred in Liverpool Street, Newgate Street, Gallowgate, Stowell Street, Friars, Rosemary Lane, Westgate Road, Close, and Forth Banks.

In the Western district, Mr. Wear reports cases from Back Lane, Buckingham Street, Seaham Street, Diana Street, Centre Street, Pitt Street, Temple Street, William Street, and Blenheim Street.

In the Elswick district, cases from Elswick East Terrace, Alexander Street, and Churchill Street.

In the Eastern district, Mr. Wilson reports cases from Pilgrim Street, the Side, Silver Street, Sandgate, New Road, Tyne Street, Ouse Street, and Lime Street.

Mr. HENRY E. ARMSTRONG read the following return of admissions to the Newcastle Fever Hospital during the month of December, 1873, with deaths during the same period:—

	Admissions.				Deaths.	
Scarlatina	6	...	2
Enteric Fever	3	...	2
				9		4

PATHOLOGICAL SPECIMENS.

Mr. BROADBENT exhibited toes and tendons cut and torn off from the foot of a miner by the cage of a coal mine.

Mr. BROADBENT also exhibited three vesical calculi (lime phosphate) from the female. The urine was highly albuminous previous to, but not since, the passing of the calculi.

Dr. GIBSON asked if Mr. Broadbent was certain that the calculi came from the bladder, as he had known instances of stone being expelled from the uterus.

Mr. BROADBENT replied in the affirmative.

Dr. HEATH showed, 1st, a testicle, cervical glands, and portions of a lung from a syphilitic patient. On admission to the Infirmary, the appearance of the man was remarkable—the colour of the body was greenish. The case was a remarkable one of syphilitic cachexia. During treatment, the colour improved, and the testicle suppurated. The patient was apparently doing well, when he sank rapidly from slight accidental hæmorrhage, followed by some peritonitis.

Dr. PHILIPSON had examined the above-named structures, which were obtained at a *post mortem* examination made by Dr. Reoch.

Dr. HEATH read the following description of their condition furnished by Dr. Philipson:—"The surface of the lung has undergone considerable distortion from the presence of nodules, more or less spheroidal in shape, varying in size from a marble to that of a walnut, of a soft and somewhat elastic consistency, and which upon section appear to have been undergoing conversion into fibroid tissue, giving rise, here and there, to the appearance of cicatrices. Under the microscope, cells are seen (some undergoing fatty transformation), which appear to have been uniformly packed among the interstices between the vessels, air tubes, and cells. The specimen is one of much interest, and not of common occurrence,—syphilitic inflammation of the liver, testicle, osseous, and nervous systems being more frequent."

2.—A specimen of cystic disease of the testicle. After the removal of the testicle the case did well. At the time of operation the patient was suffering from "inflammatory cedema" of the testicle, but nevertheless recovered rapidly.

3.—Two specimens of cystoid disease of the breast (adenoid), one of them showing a tendency to become scirrhus; and also one case of true scirrhus of the breast.

4.—A conical Derringa pistol bullet, removed from the forearm of a boy eight years old. The bullet had entered the palm of the left hand. The friends thought it had dropped out of the wound.

Two days after the injury, on probing, the annular ligament was ascertained to be entire. Inflammation of the forearm took place, with suppuration. After subsidence of swelling, &c., the bullet was extracted from near the internal condyle of the humerus, having passed *beneath* the annular ligament without rupturing it. Experimenting with the same pistol, Dr. Heath found that the aperture made by the bullet in a deal board was *less than half the size* of the bullet, which served to explain some of the circumstances of the case.

5.—Sputa illustrating the value of colour as a diagnostic:—A patient, whilst using Atropine discs for defective vision, had frequently suffered from what he described as spitting of blood, but for a length of time was unable to show the blood. He complained of pain from the use of the discs, which were too thick. On being furnished with thinner ones, the supposed hæmoptysis ceased. On a later visit, the patient produced specimens of this so-called *blood*, which was found to consist of a solution of the magenta-dyed gelatinous discs above-mentioned, which had probably passed down the nasal duct to the mouth, and had thence been spat out.

Dr. B. BRAMWELL asked if there had been, in the first case related by Dr. Heath, any disease of the *supra-renal capsules*.

Dr. HEATH stated that the capsules had not been examined.

Dr. PHILIPSON corroborated the statement read by Dr. Heath as to the pathological condition of the organs from the syphilitic patient.

Mr. MORGAN (Sunderland) had recently met with a case of syphilitic disease of the lung, similar to Dr. Heath's, which proved fatal. He had also met with a somewhat similar case of pistol shot wound of the hand.

Dr. B. BRAMWELL exhibited—1. A pneumatic lung. 2. Cancer of the stomach.

Mr. S. WILSON exhibited—1. A fibrinous plug expectorated in pneumonia, with ramifications corresponding to the divisions of the bronchi, in which it had become consolidated. The plug had since contracted to one-fourth its original size. 2. A case of spontaneous aneurism of the forearm, cured by digital compression, the patient afterwards dying from rupture of another aneurism of the arch of the aorta.

Dr. HEATH considered Mr. Wilson's specimen of spontaneous aneurism valuable, and almost unique. Approved of the treatment adopted. Asked as to the mode of pressure and how long the treatment was continued, and how soon after the beginning of pressure was the commencement of the formation of clot.

Mr. WILSON explained that the forearm had been bandaged twice to the arm, for about two hours each time, but this could not be borne. The digital pressure on the middle portion of the brachial artery could only be borne for one hour each day. Clot seemed first to form after a fortnight's pressure.

Dr. PAGE read (for Dr. Embleton) the following paper :—

CASES OF HYDROPHOBIA, WITH REMARKS, &c.

By D. EMBLETON, M.D.

THE delay of two months, which has unavoidably happened to my communication on hydrophobia, has given the opportunity of referring to other cases that have occurred in the district, and of adding quotations and remarks, which, though they have lengthened my paper, may not, I hope, prove uninteresting to the Society.

Case 1.—September 25th, 1873, at about 4 p.m., visited with Dr. Brodie, of Mirlaw, at the farmhouse of Kidlaw, between Capheaton and Littleharle, Margaret Shanks, æt 22 years, who had been bitten by a rabid dog on the 20th of July last. She had been a very fine, healthy, strong, young person. On the evening of the 24th September, Dr. Brodie had been summoned to see her, but, being from home at the time, called next morning, and immediately after his visit, persuaded that she was suffering from hydrophobia, telegraphed to Newcastle.

I found her in bed, propped up and surrounded by her friends; she was excited, restless, and alarmed, her face flushed, her eyes very bright, tearful, and glancing now and then suspiciously around in vague terror; the respiration somewhat quick, and interrupted every now and then by a deep involuntary convulsive sigh or sob; the pulse was full and soft, 88 per minute, the skin copiously perspiring. The tongue she put out freely, it was moist and had a slight ash-coloured coating. There was a good deal of salivation, and she complained of spasms in the throat, which was rather too full under and behind the jaw. The bowels had been freely purged the previous day, and the urine was quite free. The menstruation time had passed away, after a stoppage, as will be mentioned further on.

She had slept none the previous night. Her mind was clear and even acute, and she talked freely and easily in the intervals of the convulsive movements, and was affectionate and considerate to all about her.

She had not been able to swallow any liquid since the night before, but could take solids, and had taken bread and toast, saturated with water, and of these she took some from me.

On presenting her, however, with a cup of water, she said she could not swallow water, or any liquid, but would willingly try to get some down, as she was strongly urged thereto. She took the glass in hand and slowly brought it towards her mouth, but when it came within a couple of inches of her lips, one of the spasmodic heavings occurred—from the diaphragm to the pharynx, with distortion of face and throwing back of head—causing great excitement, alarm, and suffering, and she pushed the glass spasmodically from her, exclaiming, “I cannot take it, it chokes me ; I wish I could swallow it.”

Again, after an interval of quiet, she said she would try and swallow a teaspoonful which was offered to her. She took the spoon into her hand, and made a great effort to bring it to her mouth, when precisely the same spasmodic actions and general agitation occurred ; these were so characteristic and severe as to leave no doubt that the disease was really and truly hydrophobia, and not a mere nervous effect of imagination or fear. There were at this time no general convulsions.

The only thing that remained to be done was to endeavour to mitigate the sufferings of the poor girl, knowing as we did that a remedy for the disease, when once fairly established, does not exist. Accordingly, we prepared a mixture of laudanum, extract of belladonna, and chloroform, which were at hand, and of which she was enabled to take one dose by having a piece of toast well steeped in it, after which she refused to take more.

An examination of the left fore arm, where she had been bitten, showed, more than inch above the wrist and on the anterior surface, a rather dark-coloured, raised, transversely placed, cicatrix, perfectly healed, and about two inches in length. There was no tenderness on pressure, no pain in the part or in the arm above, and no discolouration of the arm. She had, she said, some pain in front of the shoulder joint, and some headache, in the morning, but they were gone off. No pain or tenderness existed about the shoulder, clavicle, or nerves of the brachial plexus, or over the chest or abdomen.

The following account of her state during the night after is from a letter of Dr. Brodie’s :—“ From 12·30 to 1·30 a.m. on the 26th she became very much excited and convulsed, so much so that she could not be kept in bed, and had to be taken to the open house door, where she seated herself nearly nude and bent double, ptyalism being so profuse, that the saliva formed a pool at her feet ; it was then streaked with blood. When I called in the morning I advised her to go to bed ; at that time, 8·30, she was occasionally conscious.

Her throat near the submaxillary and parotid glands was swollen, and her eyes, clear and white, appeared enlarged and like to be protruded from their sockets. I remained only a short time, and left when she was being removed to her room. She, at times, addressed her father, to whom she was much attached. I did not hear her attempt to bark, nor did I notice her try to bite anyone, though she had frequent opportunities of so doing from the manner in which her family went about her."

On the 26th, we saw her together at about 11.30. She was then prostrate on her back on a couch, with complete relaxation of all the muscles, and apparently moribund, scarcely showing the least sensibility when spoken to loudly by her father. One eye, the right, was closed, the other, open, showing a dilated pupil. The skin of the face, hands, and bosom, was of a livid hue. Respiration irregular, with wheezing rattle in the trachea, and salivation rather profuse. Hiccough occurred now and then, and, less frequently, a convulsive heaving at the epigastrium forced up from the stomach a quantity of grumous fluid, which flowed, uncontrolled, out by the depending corner of the mouth. Spasmodic movements of the face and upper extremities occurred occasionally, but the lower limbs were only slightly affected.

She sank, and died at about 2 o'clock p.m.; and before the interment, which took place by 3 p.m. on the 28th, decomposition had evidently set in; the weather being clear and fine by day, but cold at night.

Previous History of the Case, and Symptoms in the Dog and the Lamb.

For the following particulars I am mainly indebted to the kindness of Dr. Brodie.

Mr. Ralph Shanks, the brother of our patient, was at Newcastle Cattle Market on the 29th of July last, accompanied by his dog. On that occasion, he observed that the dog was most irritable, biting and "snacking" at every dog that came within his reach, and had, in consequence, to be tied up. He was also refractory on his way home, even biting at the horse's heels, and, as he would not follow in the usual manner, was tied to the dog-cart.

On the next day, the 30th, Ralph Shanks, his sister Margaret, and a pet lamb, all at Kidlaw, were bitten by Ralph's dog, which the same day was taken by Ralph to Dovecote Hill, a neighbouring farm belonging to his father, who resides there. At Dovecote, the dog bit Mr. Shanks, sen., very slightly, and also his dog; both dogs were Colleys, or Sheep Dogs. Dr. Brodie went in the afternoon of the same day to Dovecote, and dressed the wounds of both father and son.

Mr. Shanks, on Dr. Brodie's suggestion, destroyed his son's dog at Dovecote, but not his own, for, though he knew that the dogs

had been quarrelling, he did not believe that his own had been bitten.

On or about the 15th of September, the pet lamb, bitten on the 30th of July, became rabid, and showed the following symptoms: It attempted to butt at pigs and sheep, and bite a gate; it sometimes had convulsions all over, and after such an attack appeared stupid, and staggered in its gait; in a short time after it would attempt to eat grass, which it could with difficulty swallow, until a short time before it was killed.*

On the 18th of September, Mr. Shanks having, for a few days previous, noticed that his dog was somewhat shy, leaving him to go and lie down alone, and otherwise behaving in an unusual manner, and also knowing that the dog had bitten a bitch belonging to someone who had been passing by the farm, took alarm, and then determined to kill it.

The dog, however, had, in the meantime, passed into the house, where he bit a little boy aged three years, a son of Mr. Shanks, and afterwards the father, whilst he was being tied up. Mr. Shanks had gloves on at the time. Immediately after, the wounds of both were cauterized with strong sulphuric acid. The dog was killed.

Dr. Brodie, on passing Dovecote, on horseback, a few days before Mr. Shanks was bitten, as just stated, was followed by Mr. Shanks' dog, for nearly a quarter of a mile, barking all the way, a most unusual thing for the dog, who was, at other times, most friendly to him.

Margaret, Mr. Shanks' daughter, was bitten, as has been stated, on the 30th of July; this occurred about eight o'clock in the morning. The wounds were at once washed with warm water and milk, and she and her aunt, after dressing themselves, went straight to Dr. Brodie's house, half a mile off; the doctor met them half way, and went back with them, and when her arm was being dressed it was close upon eleven o'clock in the forenoon—three hours after the bite.

Dr. Brodie states:—"The wounds were situated two inches below the lower extremity of the radius and ulna, on the anterior surface of the arm, one about $1\frac{1}{2}$ inch long on the radial side, and the other $\frac{3}{4}$ of an inch long on the ulnar side, $\frac{5}{8}$ of an inch of sound skin intervening, the wounds communicated underneath this, some flexor tendons were injured and others exposed. I passed in the solid nitrate of silver repeatedly from either side, the wounds appearing clean. I think the tendons prevented the dog from freeing himself by tearing the parts open. I think, probably in his frenzy, he was unable to leave hold of the arm. Her sister

* On the 12th of November, Dr. Brodie informed me that since the death of Miss Shanks, one of the oxen on the farm had become rabid, and was killed.

came to her assistance, and together they managed to shake him off. I would have cut the wound open, only the tendons must have been cut also ; as it was, I passed the caustic freely underneath the tendons, causing her to slightly bend her hand. After I had finished, her father remarked when they went to Kidlaw, that the wound was a very ugly one indeed, in fact, at the time, he thought me too severe in my application. I afterwards allowed the wound to remain exposed whilst I prepared a solution of carbolic acid to dress it with, which I did in the usual manner. The following day, and for several days, she received the same treatment, and, as well, a little cooling and purgative medicine. The wound healed well, and would have done so more rapidly but for the application of the caustic, after which I applied the lotion of carbolic acid only, and it was soon well, though continuing of a slightly bluish colour, and also slightly elevated, which I thought might arise from the large sore I had made, and from a deposit of silver in the same."

Her sister Mary informed Dr. Brodie that Margaret had been sometimes complaining since the bite, and that, on the 25th of August, after returning from Matfen Flower Show, she had said "she would never see any more shows;" cried very much at times, and at other times was full of hilarity.

About six weeks after the bite, that is, about the 15th of September, and when the pet lamb became rabid, Dr. Brodie was called in to see her; her health was good, and the wound was healed, and to allay the anxiety she felt, he gave her a little medicine,—chlorate of potass and gentian, painted the cicatrix and surrounding parts with the solid nitrate of silver, and directed her to take a black draught every morning until he called again, this he did in a few days, when she appeared, and expressed herself to be, so well that all medicines were discontinued.

Up to the 22nd of September, she continued in good health. On that day menstruation was going on and near its termination when it suddenly stopped, owing to her having sat for a while at an open window, when much heated with washing clothes. She had caught cold, but did not at the time seem to suffer much from it.

"On the 23rd, she was not altogether well, and partly refused her food, and hid in a press some sago that had been prepared for her. At night she was more cheerful, and wanted meat for supper, to this Mary, her sister, objected that it was too heavy for her. They were bed-fellows; Mary awoke during the night, and Margaret said that she could not sleep, being so hot and restless; Mary found her skin burning. In the morning Margaret said that she had not slept all night. Mary made her some tea, which she took slowly, got up between seven and eight o'clock, and took a dose of salts and senna, which afterwards operated very freely.

The same evening Dr. Brodie was sent for, as stated at the commencement of this relation, but could not get to see her until next morning."

Since the above was drawn up I have received accounts more or less imperfect of two other cases, one having occurred in the South Tyne, the other in the North Tyne, district. The account of the South Tyne case was taken down from the mouth of an eye-witness, that of the North Tyne case was sent me in a short letter, by the Rev. Thomas Foster, Rector of Falstone.

The account of the former case was obtained on the 27th October, and is as follows:—

Case 2.—Jos. Robson, æt. upwards of 70, a hale, strong man, on or about the 18th of July, in the afternoon, was walking along the bridge over the Tyne below Bardon Mill, leisurely, and with his hands behind his back, when a dog came suddenly behind him and before he was aware of it, bit him through the thick of the left hand, at the ulnar side. The dog ran off, he saw no more of it.

He went to his house, at once, on the Military Road above Chesterholme, and washed his wound, it having bled freely on the road. A surgeon was sent for from Haltwhistle, who cauterised the wound, which afterwards completely healed.

Six weeks afterwards, on the 29th of August, he was gathering mushrooms in the fields, when, on attempting to get over a wall, he fell down, turned suddenly ill, and with difficulty reached home; he then exhibited the first symptoms of hydrophobia.

He complained of intense paroxysms of pain in the head and top of the throat, moaning and groaning, and calling on his attendants to hold his head firmly. Had no salivation, but was restless, and could for some days with difficulty be kept in bed. He made no attempts to bite any one, nor was there any barking like a dog, as is generally reported of such cases.

My informant saw him on the 2nd of September, when he had been ill four days. Though he earnestly tried, he could not then, or afterwards, take any liquid food. At first, he had taken an egg by teaspoonfuls, and with difficulty; afterwards water had to be kept away from him, as the sight of it brought on the paroxysms of pain in the throat and head. He died on the 5th of September, after having suffered paralysis, first of the lower, then of the upper extremities as well, and having lived seven days from the first seizure.

Case 3, is that of a woman, æt. 22, near Bellingham, who was bitten on the wrist, about three months before the 25th of October, by her own dog, near Hexham. The wound was cauterised, poulticed, and healed. About three weeks since, *i.e.*, before Oct. 25th, she was at Bellingham, took ill on the Saturday, and died on the following Thursday. I have no further details.

REMARKS.

The period of incubation, in the first of these cases, was eight weeks ; in the second, six weeks ; in the third, nine weeks. In the case reported to the Society, in March last, by Drs. Banning and Heath, it was between eight and nine weeks.

In the dog, and in the lamb, it was nearly seven weeks—forty-seven days ; in the ox, it was not ascertainable.

Trousseau* gives the period in man as varying from a few days to a year, but most frequently from one to three months ; in the dog as very variable.

Romberg† states that in sixty cases in man, it varied from fifteen days to seven or nine months, the average time being from four to seven weeks. In dogs, the outbreak occurs within fifty days.

Alfred Poland, in Holmes' Syst. of Surg. Vol I. Article Hydrophobia, says it is seldom less than forty days—from the seventh or eighth day to the seventh or ninth month.

Duration of the disease.—This in the three cases I have related was, in the first, less than forty-eight hours ; in the second, seven days ; in the third, six days. In Drs. Banning and Heath's case, it was seventy-two hours.

Trousseau states it to be fatal, when the disease is once begun, in man, constantly within the four days from the initial rigor, and the difficulty of deglutition. In dogs, as being often of several days' duration.

According to Romberg, it varies in man from thirty-six to ninety-six hours, rarely lasts five or six days, the average being three days.

Poland gives the duration of the disease in man as varying from seventy-four hours to six or seven days ; death generally occurs on the second, third, or fourth day. It has been fatal in sixteen hours, and examples have been recorded where it lasted two or three weeks.

Ratio of Mortality.—Trousseau informs us that the bite of a rabid dog is only mortal in the proportion of fifty-five to every hundred persons bitten.

Poland cites John Hunter's instance, in which out of twenty-one persons bitten by the same dog only one received the disease, and Faber's assertion that in Würtemberg of one hundred and forty-five persons bitten, twenty-eight only, or less than one-fifth, were attacked, and he goes on to say that it is generally calculated that of those who are exposed to the venom, about one in four matures the complaint, the rest escape.

According to Hertwig, the proportion in dogs that take the disease after being bitten is only twenty-three per cent.

The activity of the poison of rabies is, consequently, less than

* Clinique de l'Hotel Dieu, Vol. ii.

† Diseases of the Nervous System, Vol. ii. (Sydenh. Soc.)

that of most other animal poisons, and there is, therefore, good hope that the members of the Shanks family, who have been bitten and who still survive, may altogether escape the disease. It is now upwards of five months since they were bitten.

Hydrophobia can be communicated by means of the saliva of a man to the dog, but no case is recorded of its having been communicated from man to man.

It can, according to Hertwig, be communicated from the dog by saliva taken from the salivary ducts, from the glands themselves, and from the blood, whether venous or arterial; a proof that in dogs, at least, the blood is poisoned by the introduction of saliva under the skin. It prevails in all seasons alike, and has no special relation to the so-called "Dog-Days" of summer.

Divested of the sentimental horrors and superstitions with which it is associated in the public mind, hydrophobia, in spite of its having so often a long and uncertain time of incubation, has all the other characteristics of a virulent blood disease, arising from direct contagion, and ending in a decomposition of the blood—which is found always fluid after death—spasms of certain muscles, connected by nerves with the medulla oblongata,—asphyxia, and a general typhoid condition.

Trousseau names it *une maladie virulente*, and one which ought to be classed with glanders, as, indeed, it is by Poland and by Romberg, who styles it a Toxoneurosis.

So far as treatment is concerned, we know of none that is reliable when hydrophobia has been once established, unless we believe in the half-drowning in sea water or salivation by rapidly repeated doses of mercury, which are said by Van Swieten and others to have saved many lives.

In case No. 1 there was no water at hand, and no time for salivation to have been produced, and we may fairly doubt the efficacy of either of these modes of treatment.

The treatment, to be of use, ought to be prophylactic, and applied immediately after the bite has been inflicted. A cord tied tightly round the limb, not far above the wound, immediately after the bite, so as completely to stop the circulation of the blood, would prevent absorption, and give time for the consideration and preparation of further proceedings. Immediate excision of the bitten part, if practicable, followed up by cauterization, actual or potential, or the laying open of the wound and the application to it of the actual cauterization, or caustic potash, or strong mineral acid, or acid nitrate of mercury, or the solid nitrate of silver—preferred by Youatt, who has applied it to himself four times with success, no doubt immediately after the bite—or other substance which would deeply destroy the tissues, might be used with some prospect of success, if done at once. But if the wound be merely washed, and the circulation and consequent absorption be allowed to go on

unimpeded for hours, as is usually the case, before excision or cauterisation is performed, little good, it may readily be believed, will ensue from the operation.

Then, there is the question of amputation of the limb above the ligature. This would be probably the most effectual proceeding, if promptly executed, and a man had better lose an arm or leg than his life from hydrophobia ; but, then, as 45 per cent., nay twenty in twenty-one persons bitten never take the disease, many, both patients and surgeons, would recoil before the dismemberment. A finger or two might easily be sacrificed.

Again, it is a question whether or not persons bitten by a mad dog could be disinfected, could have the poison neutralised or destroyed in the blood, and so escape. I do not know if any treatment of this kind has been attempted ; it seems within the bounds of possibility that it might succeed, and is worth a trial. Acting on this idea, I sent out to the Shanks family a solution of sulpho-carbolate of soda, and those bitten were to take, the adults seven grains, three times a-day, dissolved in water. This they took for four or five days ; but it would be rash to say that they have by it been preserved in health.

For the cure of hydrophobia, tracheotomy* has been proposed ; but, on a dog, it did not succeed in the hands of Mr. Mayo.

Dr. Brown-Séguard has recommended "division and excision of a portion of the nerve or nerves distributed to the bitten part." His arguments are, 1st, that an alteration takes place in the part of the body that has been bitten by a mad dog before the convulsive and other phenomena of hydrophobia appear ; 2nd, that the convulsions of hydrophobia occur by fits following a kind of *aura* (pain or other sensation) starting from the wound of the bite or its cicatrix, which very often then gives way, and is replaced by a bleeding or suppurating wound.

Dr. Brown-Séguard admits that there is a poisonous principle in the saliva of rabid individuals, but he thinks that it is in consequence of changes produced locally in the nerves wounded by the bite that the phenomena of hydrophobia occur. He mentions, in support of this view, a most interesting case communicated to him by Dr. Stokes, and which occurred to the doctor's father. In this a tourniquet, applied to the limb of a hydrophobic person, arrested the convulsions several times when tightened ; a proposal to amputate the limb was negatived, and as the tourniquet could not be constantly applied, the patient ultimately died.

Now, if this be really a blood disease, tracheotomy could only at the best be expected to prolong for a short time further a miserable life ; it could not eliminate the poison or neutralise it.

With respect to Dr. Brown-Séguard's proposition as applied to

* Trousseau's Clinical Med. (New Sydenh. Soc.) Vol. I., p. 711.

Miss Shanks' case, I fear that the median and even other nerves, as ulnar, would have to be divided and a portion excised, not to mention the tendons, and thus the hand would to a large extent have been rendered useless, and amputation of the whole hand and part of the forearm would have been only a little more serious; besides, in this case there was no pain or tenderness of the cicatrix; indeed, not any alteration in its appearance, nor anything resembling an *aura* passing up from it to the head.

Doubtless there is a poison first in the part bitten and then in the blood, which becomes contaminated, and probably the poisoned blood acts locally upon the medulla oblongata and the par vagum, in the production of the phenomena observed in the organs supplied by those important nerves.

Lastly, I would ask the Society whether some precautionary means might not be recommended to the authorities to be used at cattle markets, fairs, &c., such as better care and official inspection of the numerous dogs brought together on such occasions, with the view to the removal and destruction of those which show any signs of rabid derangement, and the protection of other dogs and of their masters. Under the use of such means, Ralph Shanks' dog might have been seized and killed, and the valuable life of his sister spared to her family. In similar cases other deaths might have been prevented.

The number of dogs in England is at present, perhaps, unprecedentedly great, much too great, as the Farmers' Club of this town has very lately declared.

A similar plethora of dogs is mentioned by Romberg, as having occurred some years ago in Berlin, where a special tax was imposed, he informs us, with the most beneficial results in reducing the number of cases of hydrophobia, then very numerous. An increase of the dog tax in England would doubtless produce a considerable decrease in the number of cases of hydrophobia among us.

P.S.—The following clipping from the *Newcastle Daily Journal* of January 15th instant shows that even now, about four months after the occurrence of the cases I have reported, hydrophobia is still among us:—

At a meeting of the Newcastle Town Council, held yesterday, a letter was received from the Chief Constable stating that during the past month the police had been called upon to destroy two or three mad dogs found at large in the streets. On November 12th, a dog bit a girl named Isabella Russell at St. Lawrence, and she died on the 7th inst. from hydrophobia. The Chief Constable suggested the advisability of the Local Authority making an order placing such restrictions as might be thought necessary upon all dogs not under control.—On the motion of Mr. George Forster, seconded by Mr. Ald. Hunter, it was resolved that notice be given that the law relating to dogs will be strictly enforced.

“The law relating to dogs” evidently had either not been successful in its operation, or had not been enforced at all. Let us hope it will now be applied.

Dr. HEATH, with regard to the foregoing cases, remarked on the absence of two very usual symptoms, viz., convulsions on attempting to drink, and fear of cold air on the skin, and also extolled the employment of hypodermic injections of chloral, the benefit of which had been apparent in a case lately brought by himself before the Society. Agreed on the necessity for more careful examination of the dogs coming to the public markets, &c. Suggested that all such dogs should be muzzled.

Dr. FOTHERGILL (Darlington) had recently had a case of hydrophobia where the fear of cold air was a remarkable symptom. The patient could not drink water with his eyes open, but could swallow a teaspoonful of liquid given him when his eyes were closed ; and could also swallow by means of a tube of sufficient length to pass into a vessel of liquid placed behind his back. By these means the life of the patient was prolonged eleven days.

Dr. EASTWOOD had met with a case occurring about the same time as the last mentioned, which proved fatal in three days.

At the suggestion of the PRESIDENT, the discussion, on the special recommendation, at the end of Dr. Embleton's paper, was adjourned until next meeting of the Society.

NORTHUMBERLAND & DURHAM MEDICAL SOCIETY.

THE fifth monthly meeting of the Society was held in the Library of the Infirmary, on the evening of Thursday, February 12th, 1874. The attendance of members was unusually large. Dr. Philipson, President, occupied the chair.

The following gentlemen were elected members of the Society:—

Mr. George W. Crowe, Hartlepool.

Dr. Mackay, Crook.

Mr. Berry, Barnard Castle.

The following gentleman was proposed for election at next meeting:—

Mr. G. S. Brady, Sunderland.

PREVALENT DISEASES OF THE DISTRICT.

The SECRETARY read the minutes of the last committee meeting, as follow:—

COMMITTEE MEETING, JANUARY 10, 1874.

The letters from the Town Clerk and the Secretary of the Newcastle and Gateshead Water Company were read, and the following resolutions were unanimously adopted:—

“That the receipt of the letter from the Newcastle and Gateshead Water Company be simply acknowledged.”

“That the receipt of the letter from the Town Clerk be acknowledged; and that in answer it be stated that in consequence of the Society having received a letter from the Newcastle and Gateshead

Water Company, so taking exception to the report of the Society, the Society regrets that it cannot comply with the request of the Sanitary Authority."

The SECRETARY also read the following replies to the Town Clerk and the Secretary of the Water Company, in reference to their communications respecting the report on the high death-rate:—

Newcastle-upon-Tyne, January 10th, 1874.

SIR,—We beg to acknowledge the receipt of your communication of the 3rd inst. to the Northumberland and Durham Medical Society.

We have the honour to be, sir, your obedient servants,

(Signed) G. H. PHILIPSON, President, } Northumberland
HENRY E. ARMSTRONG, Hon. Sec. } and Durham
Medical Society.

To D. D. Main, Esq.,

Secretary Newcastle-upon-Tyne and Gateshead Water Company.

Newcastle-upon-Tyne, January 10th, 1874.

DEAR SIR,—We beg to acknowledge the receipt of your communication of the 27th ult. from the Sanitary Authority of the Borough of Newcastle-upon-Tyne to the Northumberland and Durham Medical Society.

We beg to inform you that in consequence of the Society having also received a communication from the Newcastle and Gateshead Water Company, taking exception to the report of the Society, the Society regrets that it cannot comply with the request of the Sanitary Authority.

We have the honour to be, dear sir, your obedient servants,

(Signed) G. H. PHILIPSON, M.D., President, } Northumberland
HENRY E. ARMSTRONG, Hon. Secretary, } and Durham
Medical Society.

R. P. Philipson, Esq., Town Clerk,

Town Hall, Newcastle-upon-Tyne.

To complete the information on the epidemic diseases prevailing in Newcastle, Mr. Tennant kindly forwarded the following return (taken as read) of the localities affected by Scarlet Fever, as shown by the admissions to the Newcastle Dispensary during the months intervening between the last and present sessions of the Society. The locality of the same disease during the month of November, which had been previously omitted, is also added.

RETURN of the LOCALITIES of SCARLET FEVER admitted to the Newcastle Dispensary, from March to August, 1873, inclusive, and in November, 1873:—

CENTRAL DISTRICT.

Locality.	March. No. of Cases.	April. No. of Cases,	May. No. of Cases.	June. No. of Cases.	July. No. of Cases.	Aug. No. of Cases.	Nov. No. of Cases.
Queen's Lane	1	...	...	..	...	...	...
Westgate Road, Daw- son's Court	1	...	1	1	...	...
9, Westgate Road	1
Chapel Yard, Tuthill Stairs.....	1	...
21, Denton Chare	1
17, Denton Chare	1
St. Nicholas' Church-yd. Trotter's Court, Close	1	...	...	...	...
Joint Stock Entry, Side	2	...	...	1
Black Bull Entry, { Forth Banks	1	...	...	...	...	...
Barrow Court, New- gate Street	2
Hall's Court, do.	1
14, High Friar Street...	1	...	...
20, High Friar Street...	1	...
28, High Friar Street...	...	1	...	...	...	1	...
31, High Friar Street...	1	3	...
10, Monk Street	1
Stowell Street	4	2
Stowell Square	2	...	2
1, Percy Court	2	...	...
71, Percy Street	1	...	...
Northumberland Court	1	...
St. Andrew's Court	1	...
Total.....	1	3	1	3	13	12	12

ERRATA.—In report for October, 1873, instead of 8 cases of Scarlet Fever in Central district, in July, read 3; instead of 2 cases of Measles, read 7; and instead of 23 and 20 of the totals of Scarlet Fever and Measles, read total Scarlet Fever 18, Measles 25.

WESTERN DISTRICT.

Locality.	March	April.	May.	June.	July.	Aug.	Nov.
Duke Street.....	2	...	...	...	...	...	...
7, Pitt Street	1	...	...	...	...	...	...
16, George Street	1	...	...	...	...	...	...
11, Back Lane.....	...	1	...	...	...	...	...
29, George Street	1	...	...	...	...	...
105, Blandford Street...	...	1	...	...	...	...	...
52, Buckingham Street	...	2	...	...	...	...	...
10, Buckingham Street	...	2	...	...	...	...	...
10, New Mills	1	...	...	...	...
5, Blandford Street	2	...	...	...	...
10, High Pitt Street	2	1	...	...	1
Temple Street	1	1	1	...
53, George Street	1	...
19, Spring Street	1	...
28, Oyster Shell Lane...	3
107, Blandford Street...	1
8, High Pitt Street	2
17, Pitt Street.....	4
86, Derby Street.....	4
8, Wellington Street	1
28, Wellington Street	8
24, Wellington Street	3
3, Cree's Yard...	2
103, Blandford Street...	1
101, Blandford Street...	1
35, Duke Street	1
19, Temple Street	2
1, Ponteland Terrace...	2
46, Elswick Street	1
17, William Street	1
9, Pace's Buildings.....	4
18, Oyster Shell Lane	2
24, Diana Street	1
Total.....	4	7	5	2	1	3	45

EASTERN DISTRICT.

Locality.	March.	April.	May.	June.	July.	Aug.	Nov.
Richmond Street.....	2	...	...	...	...	...	...
Union North Terrace...	2	...	...	...	...	...	...
Richmond Place.....	...	1	...	...	...	...	...
Elwick Lane	1	2	2	2	...	...
Manor Chare	1
Pilgrim Street.....	...	1	...	...	3	...	2
Little Blagdon Street...	...	1	1	...	...	...	...
Mowbray's Buildings...	...	1	...	...	...	...	...
Doctor's Entry, New-rd	1	...	...	...	...
Melbourne Street
Buxton Street	3	...	...	...	...
Wilkinson Street	4	2	...	...	...
Pandon Bank	2	2	...	...	...
Byker Buildings	1	...	...	...	...
Ouse Street	1	...	...	...
Carloli Street	2	...	...	...
New Road	2	1	...	...
Albion Row.....	2	...	...	...
Chatham Place	1	...	...
Chapel Lane.....	2	...	...
Silver Street	1	...	1
Half Moon Lane.....	2	...	...
9, Blagdon Street	3	...
Young's Ent., Sandgate	2	...
Spicer Lane	1	...
8, Picton Terrace	1	...
4, New Pandon Street	1	...
Cowgate	1	...
6, Shieldfield Terrace...	3
Shieldfield Lane	1
Engine Street	1
43, Gibson Street	2
Leighton Buildings.....	2
11, Wall Knoll	1
Stuart's Court, Pil- grim Street	1
Total.....	4	5	14	13	12	9	15

ELSWICK DISTRICT.

10, Tyne Street .....	...	...	...	...	1	...	...
74, Rendal Street .....	...	...	...	...	...	1	...
Elswick East Terrace...	...	...	...	...	...	...	3
45, Noble Street.....	...	...	...	...	...	...	1
11, Teynham Street ..	...	...	...	...	...	...	3
10, Tyneside Terrace...	...	...	...	...	...	...	1
Total.....	...	...	...	...	1	1	8

*Return of Admissions of Zymotic Diseases to the Newcastle Dispensary during
the month of January, 1874.*

CENTRAL DISTRICT.

Locality.	Ery. sipelas.		Scar- latina.		Febri- cula.		Diar- rhœa.		Enteric Fever.		Measles		Per- tussis.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
110, Newgate Street	1	...	...	...	...	...	...	...	...	...	...	...	...	...
7, Friars .....	...	...	3	1	...	...	...	...	...	...	...	...	...	...
6, South Street .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
11, Tanners' Court, Friars .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...
28, Nun Street .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Half Moon Yard.....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Dalrymple's Court .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
5, Pit Row, Forth Banks .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
3, Leazes Court .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...
41, Clayton Street	1	...	...	...	...	...	...	...	...	...	...	...	...	...
2, Bailiffgate .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Black Bull Entry, Forth } Banks	1	...	...	...	...	...	...	...	...	...	...	...	...	...
2, Stowell Square .....	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Black Gate .....	...	...	1	1	...	...	...	...	...	...	...	...	...	...
62, Gallowgate .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
10, Northumberland Crt.	1	...	...	...	...	...	...	...	...	...	...	...	...	...
76, Clayton Street	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	5	...	9	2	4	...	1	...	1	...	...	...	...	...

EASTERN DISTRICT.

27, Bell's Court, Pilgrim } Street .....	...	...	2	1	...	...	...	...	...	...	...	...	...	...
109, Pilgrim Street .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
172, Pilgrim Street .....	...	...	2	...	...	...	...	...	...	...	...	...	...	...
90, Shield Street.....	...	...	...	...	...	...	1	...	...	...	...	...	...	...
37, Dog Bank .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Causey Bank .....	...	...	2	...	...	...	...	...	...	...	...	...	...	...
15, Chatham Place .....	...	...	3	1	...	...	...	...	...	...	...	...	...	...
2, Stepney Square .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
3, Downie's Entry	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Keelmen's Hospital .....	...	...	...	...	2	...	...	...	...	...	...	...	...	...
20, Gibson Street .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
11, Lime Street	1	...	...	...	...	...	...	...	...	...	...	...	...	...
6, Pandon Bank .....	...	...	...	...	...	...	...	2	1	...	...	...	...	...
13, Tyne Street .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
8, Picton Terrace .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
19, Little Blagdon Street .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
19, Dog Bank .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
23, Silver Street .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
8, Quality Row .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...
4, Mill Lane.....	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Dispensary Lane.....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
8, Bedford Place.....	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Total.....	2	...	15	3	8	...	1	...	2	1	1	...	1	...

WESTERN DISTRICT.

Locality.	Erysipelas.		Scarlatina.		Febricula.		Diarrhoea.		Enteric Fever.		Measles.		Pertussis.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
109, Mansfield Street.....	1	..	..	..	..	..	..	..	..	..
33, Hill Street.....	1	1	..	..	..	..	..	..	..	..	..	..
99, Blandford Street	3	1	..	..	1	..	..	..	..	..	..	..
11, Pitt Street.....	1	..	..	..	..	..	..	..	..	..	..	..
8, Centre Street	1	1	..	..	..	..	..	..	..	..	..	..
6, Centre Street	2	1	..	..	..	..	..	..	..	..	..	..
4, Centre Street	1	..	..	..	..	..	..	..	..	..	..	..
36, Diana Street.....	1	..	..	..	..	..	..	..	..	..	..	..
4, Back Derby Street.....	1	..	..	..	..	..	..	..	..	..	..	..
71, Stone Street	1	..	..	..	..	..	..	..	..	..
26, Edward Street	1	..	..	..	..	..	..
16, Edward Street	1	..	..	..	..	..	..	..	..	..	..	..
64, Brewery Lane	2	..	..	..	..	..	..	..	..	..	..	..
12, Palace Street	1	..	..	..	..	..	..	..	..	..	..	..
108, Blenheim Street.....	1	1	..	..	..	..	..	..	..	..	..	..
24, Churchill Street	1	1	..	..	..	..	..	..	..	..	..	..
15, Sunderland Street	1	..	..	..	..	..	..
22, Temple Street	3	..	..	..	..	..	..	..	..	..	..	..
Total.....	20	6	2	..	1	..	2	..	..	..	..	..

ELSWICK DISTRICT.

19, Mill Lane	1	..	..	..	..	..	..	..	..	..	..	..	..	..
41, Mill Lane .....	..	..	..	..	..	..	1	..	..	..	..	..	..	..
10, Railway Terrace .....	..	..	..	..	1	..	..	..	..	..	..	..	..	..
7, Teynham Street.....	..	..	2	..	..	..	..	..	..	..	..	..	..	..
322, Scotswood Road.....	..	..	..	..	1	..	..	..	..	..	..	..	..	..
21, Penn Street .....	..	..	..	..	..	..	..	1	..	..	..	..	..	..
16, Shumac Street .....	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Total.....	1	..	3	1	2	..	1	..	1	..	..	..	..	..

SUMMARY.

Central District	5	..	9	2	4	..	1	..	1	..	..	..	..	..
Eastern District	2	..	15	3	8	..	1	..	2	1	1	..	1	..
Western District .....	..	..	20	6	2	..	1	..	2	..	..	..	..	..
Elswick District.....	1	..	3	1	2	..	1	..	1	..	..	..	..	..
Total Cases	8	..	47	..	16	..	4	..	6	..	1	..	1	..
Total Deaths .....	..	..	..	12	..	..	..	..	..	1	..	..	..	..

Mr. HENRY E. ARMSTRONG read the following return of admissions to the Newcastle Fever Hospital during January, 1874, with deaths during the same period:—

	Admissions.					Deaths.			
Typhus	3	...	...	...	...
Scarlet Fever	1	...	...	...	1
Catarrh	1	...	...	...	...
Pneumonia	1	...	...	...	...
Enteric Fever	1
					6				2

Mr. H. E. ARMSTRONG censured the careless diagnosis which exposed patients suffering from such complaints as catarrh and pneumonia to the risk of contagious fever. From the small number of other patients in the Hospital at the time of their admission, he had been able to isolate these cases, and they had been discharged, so far as he knew, without receiving contagion of fever. Unfortunately, the most careful attempts at isolation in a Fever Hospital might be unavailing, as the following case would show:—Some months ago a case, certified as fever, was sent to the Fever Hospital, and on admission was placed at once in the probation ward. It proved to be a mild case of pneumonia. The patient was discharged as soon as he was able to bear removal, and in a few days thought himself well. Ten days after his discharge from Hospital, he again sickened, and was re-admitted. He was now suffering from small-pox, of which there were several cases in Hospital at the time, and from which the contagion had probably been conveyed by the clothing either of the nurse or himself (the speaker) in passing from one ward to another. The case was one of the severely confluent, asthenic form; the pocks did not mature properly, and life was despaired of. The patient did eventually, after a long illness, recover. As another instance, the Society would remember a case of skin eruption which he brought before them about a year ago. The patient had been sent to Hospital as a case of small-pox, and was shown to the Society on the evening of the same day. He was suffering from syphilis, the papular eruption of which had been mistaken for small-pox. These cases showed the fearful risk to which patients were exposed when sent to the Fever Hospital through faulty diagnosis.

Dr. EASTWOOD supported the remarks of the last speaker. During his year of office at the Fever Hospital several cases had been, such as cases of fever which were not such. Thought that in some cases the anxiety of the medical attendant to protect the healthy at home, led to his sanctioning the removal of the patient from the house, before the disease was fully developed.

The PRESIDENT remarked on the small number of cases in the Fever Hospital, notwithstanding the high death-rate in the borough—the mortality for last week being over 30 per 1,000.

Mr. REDMOND said Gateshead was at present remarkably free from epidemic disease.

Mr. ARMSTRONG, in connection with the remarks of the President, stated that there was some irregularity as to the return of deaths in the Workhouse. The death-rate, it seemed, was some weeks lower than it should be from the omission of the deaths at the Workhouse, and had been swelled last week by deaths in that institution extending over more than the previous week.

Dr. LEGGAT asked Mr. Armstrong if the quarterly returns of deaths were influenced thereby.

Mr. GOWANS asked Mr. Armstrong if the death-rate of Newcastle were higher than that of any other town in England.

Mr. ARMSTRONG, in reply, stated that the quarterly returns of death were probably not affected by the irregularity alluded to, but the weekly returns which came before the public were inaccurate. The weekly death-rate had only occasionally been the highest in the kingdom. The average death-rate of the town was about 26 or 27 per 1,000 living.

Dr. ARNISON explained that the annual average death-rate was 27·2 per 1,000. Higher than that was considered unhealthy.

Dr. GIBSON asked if the question of the high death-rate and the communications from the Sanitary Authority and the Water Company, were to remain as they now stood, and to go no further.

The PRESIDENT stated that the matter would for the present remain as it was, and explained that the reason for the committee withholding the facts and evidence was that there was some possibility of the officers of the Society sustaining legal action at the hands of the Water Company, in consequence of the report on the high death-rate.

PATHOLOGICAL SPECIMENS.

Mr. JEAFFRESON showed an upper limb, removed with the scapula and part of the clavicle, for malignant osteoid disease, with photographs of the case.

The PRESIDENT remarked on the rarity of secondary cancerous deposits in the osteoid form of the disease.

Dr. EMBLETON asked if Mr. Jeaffreson considered the osteoid form were an ossification dependent on the encephaloid. If so, there were two distinct processes going on at the same time.

Mr. JEAFFRESON said that there were in his specimen two distinct bony structures, one resembling compact bony tissue, the other of a somewhat fibrous nature, with cancerous elements.

Dr. HEATH asked if the deposit in the *glands* were bony, for such a circumstance was unusual.

Mr. JEAFFRESON said the appearance was as though the glands were the seat of the bony deposits.

Dr. GIBB had generally found that the cancer had, acting as a foreign body, caused the formation of new bone. In cases of osteoid disease the old bone frequently snapped, and new bone was thrown out.

Mr. JEAFFRESON said the results were different in osteoid cancer and osteo-sarcoma.

Dr. GIBSON did not know that any form of osteoid disease, malignant or otherwise, could proclaim itself in the glandular tissues of the axilla. Was it not merely a form of calcareous matter?

Mr. JEAFFRESON stated that it was true bony tissue with Haversian canals, canaliculi, &c., &c.

Dr. HEATH showed—1. A thimble removed from the throat of a child, which had been lodged in the throat about a week. 2. Portion of upper jaw, ethmoid, &c., successfully removed from a patient on account of tumour. The disease occupied the interior of the antrum, not implicating the floor. The integrity of the eye will be impaired, but the roof of the mouth is intact. There is comparatively little disfigurement.

Mr. CHAS. CARR showed a specimen of ulcer of the duodenum with perforation, and stated that he would afterwards read a paper on the same case.

Mr. MORGAN showed—1. A specimen of malignant disease of the humerus, from a man sixty years of age. On admission to the Sunderland Infirmary a month ago, the elbow joint was twice the size of its fellow, elastic, and free from pain on pressure. There was cedema of the forearm and hand. There was an obscure history of a sprain received about four months before. About this time swelling over the external condyle was noticed. The patient worked until a week before admission, when in consequence of a wrench, he felt something give way, and the joint became rapidly swollen and very painful. The glands were not enlarged. Considering his age and feebleness, it was thought advisable to amputate the arm through the upper third, instead of through the shoulder. The brachial artery was atheromatous. The patient has done well, and is now convalescent. 2. A case of cystic disease of the breast of fourteen years' duration, afterwards becoming schirrous at the change of life. The pain was almost equally referred to the unaffected breast, and has, since operation, wholly ceased.

Mr. REDMOND showed a specimen, passed by a patient, of what was considered a worm, but was in reality the intestine of a fish.

Dr. PHILIPSON alluded to a case of a supposed human parasite recently brought under his notice, which on examination proved to be a piece of orange, which had been swallowed without mastication.

The PRESIDENT invited discussion on the paper of Dr. Embleton, with special reference to the recommendation contained in the latter portion of it.

After some general remarks, at the request of the President,

Dr. EMBLETON read the suggestions from the latter part of his paper on Hydrophobia (printed in the last report of the Society), and also made the following suggestions:—With the view of assisting to put a stop to the spread of Hydrophobia, it is recommended: 1st. That the Act of Parliament to provide further protection against dogs (34 and 35 Vict., chap. 55) be fully enforced throughout the district. 2nd. That dogs brought to markets, fairs, &c., be examined on their arrival by a competent person or inspector to be appointed by the Local Authority for that purpose. That those dogs which are not wanted for use, be tied up, apart, in a suitable shed or building, and provided with straw, and at least water, if they are to remain long. That all dogs at markets, fairs, &c., be muzzled; and if any be found exhibiting the slightest symptoms of Hydrophobia, that they should at once be destroyed by the inspector. 3rd. That a petition be forwarded by the Local Authority to Parliament (supported by the Medical Society and the Farmers' Club), asking for some considerable increase in the amount of the dog-tax; the present tax, 5s. per annum, being so low as to encourage a useless and injurious excess of dogs—an excess most favourable to the rise and spread of Hydrophobia.

Dr. HUMBLE stated that, at the last meeting of the Council, instruction had been given that the first recommendation in Dr. Embleton's paper be carried into effect.

Dr. EASTWOOD agreed in the suggestions of Dr. Embleton, but thought it would not be desirable to make special recommendations to the Council on the subject.

Mr. DODD thought it would be well if it were recommended that the dogs be chained, and kept in a covered place.

Dr. HUMBLE thought this would come better from the Society for Prevention of Cruelty to Animals.

Mr. JEAFFRESON alluded to the resemblance of Hydrophobia to Tetanus. One point of difference was that hydrophobic virus

would reproduce the same disease, but with Tetanus this was not the case. Thought the germs of both Hydrophobia and Tetanus were seated in the neighbourhood of the wound. In this the similarity to Syphilis was apparent. Recommended some modification of Esmarch's bloodless operation to the limb affected by Hydrophobia.

Dr. EASTWOOD proposed, and Mr. JOBSON seconded, that general recommendations, in accordance with the tenor of the suggestions of Dr. Embleton, be made to the Town Council.

Dr. HUMBLE asked if the proposal of Dr. Eastwood came within the objects of the Society.

Mr. FIELDEN thought that in such an important matter the Society should not be bound by ordinary rules.

The SECRETARY read the rules referring to the objects of the Society ; after which

Dr. EMBLETON agreed that the Society would be exceeding its limits if it now proceeded to recommend to the Sanitary Authority. Thought that a resolution should be made to embrace the power of making such recommendation. With respect to the observations of Mr. Jeaffreson, Dr. Embleton recommended immediate excision of the part, with stoppage to the circulation as an auxiliary in the treatment. Bandaging alone could not prevent the phenomena, which would recur on removal of the pressure.

Owing to the lateness of the hour, the remaining business was deferred until next meeting of the Society.

THE sixth monthly meeting of the Society was held in the Library of the Infirmary, on the evening of March 12th, 1874. Dr. Philipson, President, occupied the chair. The attendance of members was moderate.

Mr. G. S. Brady, of Sunderland, was elected a member of the Society.

The names of the following gentlemen were proposed for election :

Mr. John Galloway, Newcastle.

Dr. H. J. Yeld, Sunderland.

Mr. W. L. Emmerson, Newcastle.

The SECRETARY stated that Mr. Tennant had written to say he was unable to furnish the regular monthly returns of the Dispensary in time for the meeting. The Secretary asked that they might be printed in the usual manner, which was agreed to.

*Return of Admissions of Zymotic Diseases to the Newcastle Dispensary during
the month of February, 1874.*

CENTRAL DISTRICT.

Locality.	Erysipelas.		Scarlatina.		Febricula.		Diarrhœa.		Enteric Fever.		Measles.		Contnd. Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Stout's Crt., Orchard St.	1	...	...	...	...	...	...	...
12, Park Place, Prudhoe Street	1	...	...	...	...	...	...	...	...	...	...	...
25, Liverpool Street	1	...	...	...	...	...	...	...	...	...	...	...
7, Factory Yd., Gallowgt.	1	...	...	...	...	...	...	...	...	...	...	...
11, Park Place, Prudhoe Street	1	...	...	...	...	...	...	...
10, Monk Street	1	...	...	...	...	...	...	...	...	...	...	...
14, Mackford's Entry, Northumberland St.	1	...	...	...	...	...	...	...	...	...
28, Gallowgate	1	...	...	...	...	...	...	...	...	...	...	...
2, Factory Yard, Gallowgate	2	...	...	...	...	...	...	...	...	...
62, Gallowgate	1	...	...	...	...	...	...	...	...	...	...	...
110, Percy Street	1	...	...	...	...	...	...
3, Northumberland Court	1	1	...	...	...	...	...	...
47, High Friar Street	3	...	...	...	...	...	...	...	...	...	...	...
7, Friars Green	1	...	...	...	...	...	...	...	...	...
10, Bailiffgate	2	...	...	...	...	...	...	...	...	...	...	...
2, Bailiffgate	1	...	...	...	...	...	...	...	...	...	...	...
2, Pringle's Court, Orchard Street	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	1	...	12	...	4	...	3	1	1	...	...	...	...	...

EASTERN DISTRICT.

[illegible]

WESTERN DISTRICT.

Locality.	Ery-sipelas.		Scar-latina.		Feбри-cula.		Diar-rhoea.		Enteric Fever.		Measles		Contnd. Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
98, Blenheim Street	1	...	...	...	...	...	...	...	...	...
12, Palace Street	2	...	...	...	...	...	...	...	...	...	...	...
79, Blenheim Street	1	...	...	...	...	...	...	...	...	...	...	...
18, Oaks Place	1	...	...	...	...	...	...	...	...	...
105, Elswick East Terrace	3	1	...	...	...	...	...	...	...	...	...	...
11, Sunderland Street	1	...	...	...	...	...	...	...	...	...
George Street	1	...	...	...	...
6, High Pitt Street.....	2	...	...	...	...	...	...	...	...	...	...	...
43, Bailey Street.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...
48, Buckingham Street	1	...	...	...	...	...	...	...	...	...
33, Hill Street.....	3	1	...	...	...	...	...	...	...	...	...	...
4, Spring Garden Terrace	2	...	...	...	...	...	...	...	...	...
126, Blandford Street	1	...	...	...	...	...	...	...	...	...	...	...
122, Blandford Street ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
121, Blandford Street	2	1	...	...	...	...	...	...	...	...	...	...
99, Blandford Street	1	...	...	...	...	...	...	...	...	...
15, Sunderland Street	1	...	...	...	...	...	...
4, Back Derby Street.....	1	...	...	...	...	...	...	...	...	...	...	...
Total.....	2	...	15	3	7	...	...	...	1	...	1	...	...	...

ELSWICK DISTRICT.

13, Ramshaw's Buildings .....	...	...	...	...	...	...	...	...	...	...	...	2	...	...
35, Noble Street.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...
10, Tullock Street .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...
750, Armstrong Street .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
2, Riddell Court.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...
9, Teynham Street.....	...	...	...	...	...	...	...	...	...	...	...	1	...	...
31, Middle Street .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...
41, Noble Street.....	...	...	...	...	...	1	...	...	...	...	...	...	...	...
21, Penn Street .....	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Total.....	2	...	2	...	1	...	1	...	1	...	...	3	...	...

SUMMARY.

Central District	1	...	12	...	4	...	3	1	1	...	...	...	...	...
Eastern District	2	...	5	...	3	...	...	...	...	...	...	...	...	...
Western District	2	...	15	3	7	...	...	1	...	1	...	...	...	...
Elswick District.....	2	...	2	...	1	...	1	...	1	...	...	3	...	...
Total	7	...	34	3	15	...	4	1	2	1	1	...	3	...

TOTAL.

	Cases.	Deaths.
Central District	21	1
Eastern District	10	—
Western District	26	3
Elswick District	9	1
	66	5

Mr. HENRY E. ARMSTRONG stated that the following cases had been admitted to the Newcastle Fever Hospital during the month of February, 1874 :—

Measles	1 case.
Enteric Fever	2 cases.
Typhus	2 cases.
Scarlet Fever	1 case.

There had been one death from Typhus during the month.

Dr. CHARLTON spoke of the unusually large proportion of cases of Scarlet Fever, with Rheumatic complications, which had come under his notice during the present outbreak. He had seen only one well-marked instance of deep throat ulceration. The "Scarlet Fever collar" had not been so frequent as in former epidemics.

Mr. REDMOND had seen in Gateshead Dispensary practice three cases of Scarlet Fever fatal from hepatic congestion and jaundice. *Post mortem* examinations were not allowed. Had seen a case of deep throat ulceration with hæmorrhage.

Mr. BROADBENT had observed in his colliery practice much of the rheumatic complication alluded to.

Dr. L. ARMSTRONG corroborated the remarks of the former speakers with respect to Scarlet Fever. Had also had several cases complicated with convulsions. Had attended one rapidly fatal case of malignant Scarlet Fever occurring after Measles. A sister of the foregoing had a sharp attack of Jaundice after Scarlet Fever. She recovered. Had also attended several cases of Acute Rheumatism and Erysipelas.

Mr. HENRY E. ARMSTRONG described several instances in support of the theory that wherever Zymotic disease assumed an appearance of malignity, there was some tangible marked insani-
tary condition to account for it.

PATHOLOGICAL TRAY.

Dr. GIBB showed femur with a large osteo-sarcomatous tumour, removed by amputation of the hip-joint, from a young man, a patient of Mr. Hewitson's, in Weardale. A fortnight before the

operation the patient had heard a distinct snap, and found that the bone was broken, after which the tumour rapidly increased in size. The speaker had, on the suggestion of Dr. Page, amputated the limb by Esmarch's method, pressure being made on the aorta. No arterial blood, and only about a wine-glassful of venous blood escaped during the operation. One vessel spurted on the removal of the ligature, but was readily controlled. At first the case progressed favourably. Gangrene, however, set in, and the patient died about a fortnight after the operation. Dr. Gibb had observed offensive smells in the bed, which might be connected with the gangrene. In the opinion of some, Esmarch's method was apt to be followed by sloughing; but the speaker could not blame the operation in this case.

Dr. L. ARMSTRONG expressed his admiration of the operation by the bloodless method. Believed he had been the first to adopt it in the Infirmary. The operation had been followed by considerable retraction of flaps, but no sloughing.

Dr. B. BRAMWELL considered that sloughing would have set in sooner in Dr. Gibb's case, had it been the result of the operation.

Dr. REOCH explained why a *bony* preparation only had been made of the osteo-sarcoma of Dr. Gibb's case.

The PRESIDENT inquired of Dr. Armstrong if he had observed any "head symptoms" after operation by Esmarch's method, and if the cases in which he had performed this operation were the result of disease or injury.

Dr. L. ARMSTRONG had not observed any tendency to "head symptoms" after operation by the bloodless method. His cases had been traumatic.

Dr. PAGE had seen several operations by Esmarch's method, and in none had head symptoms supervened, even after double amputation for injury. After operation in a particular case, the pulse was better after operation than before. There was a tendency to sloughing after the operation. Hospital gangrene had never been observed after it in this hospital.

Dr. NEWCOMBE asked as to the effect of chloroform in such cases.

Dr. GIBB, in reply, said that in the case of his patient the limb had been swollen before operation; the disease assumed the form of *fungus hæmatodes*. The man bore the chloroform well; the temporal vessels were full, but that was all. The patient certainly had more blood in his *body* after the operation than before it.

Dr. REOCH showed a phosphatic calculus from the Appendix vermiformis cæci, which, from its size and shape, could only have been formed in the appendix, probably from inspissated mucus.

The SECRETARY showed, for Dr. Embleton (1), specimen of magnetic iron ore, added by the Chinese to tea sent to England. A friend of Dr. Embleton's, Mr. L. Thompson, of Sandy, Bedfordshire, writes under date of January 31st ult.: "A cry has been got up about iron filings in tea, and I have proved that what is called iron filings is magnetic iron ore, of which I send you a little taken from the tea. It makes a nice microscopic object from its octohedral form, and shows the ingenuity of John Chinaman. Iron filings would rust and make ink with the tannia of the tea. This ore does not." (2) Specimen of fractured and reunited bone of the tail or fin of a fish (*Ctenodus*) of the carboniferous period, from the Low Main Seam at Newsham Colliery, near Blyth. The section of this fossil was prepared by Mr. Thomas Atthey, of Gosforth.

Dr. NEWCOMBE showed a specimen of encephaloid of the testicle. The history was syphilitic. After operation the case did well. Under the microscope cancer cells were visible.

Dr. REDMOND showed a large specimen of uterine hydatids, removed piecemeal. The history of the case is briefly as follows:—The patient, Mrs. W., æt. 30, of delicate, strumous habit, had one child, two years old. Was called to see her early one morning. Found her with symptoms apparently of a miscarriage; considerable hæmorrhage, and much irregular pain; os very slightly dilated, high up, nothing protruding. Plugged vagina with silk handkerchief steeped in cold water, and applied cold napkins to habia. Ordered acid sulph. dil \mathcal{M}_{xx} , ext. ergotæ liq. \mathcal{M}_{xv} , sol. morphia \mathcal{M}_x , infus. rosæ \mathfrak{z} i every two or three hours, which gave very speedy relief. The patient at this time thought herself to be in the third month of pregnancy. In about a month after, she had a second attack, but much less urgent. She had been suffering much in the interval from morning sickness and considerable debility, and could eat no solid food, her stomach was so extremely irritable, to relieve which I gave her bismuth hydrocyanic and infusion of columbæ with advantage. About $2\frac{1}{2}$ months from the first attack she had a third. I was from home when sent for, and on arriving found her exsanguine, livid, and almost pulseless. Very copious hæmorrhage had been going on for three or four hours; vagina was full of clots, removal of which was followed by a free gush of hæmorrhage. Had no pains for some two hours. On examination found os would just admit the tip of one finger, and felt presenting a soft mass, feeling to the finger like placenta. Gave her 2 oz. brandy with water, and \mathfrak{z} i of liquor ergotæ. After about $1\frac{1}{4}$ hours steady, continued pressure, I dilated the os sufficient to admit three fingers easily, and removed a large basinful of hydatids piecemeal. Got firm contraction of uterus by external manual pressure, and applied

a tight binder and pad. There was not a drop of hæmorrhage after, but the patient was intensely prostrated for forty-eight hours. Gave her teaspoonsful of brandy and strong beef tea at frequent intervals, and small doses of opium to allay irritation and relieve insomnia. Washed out the vagina and uterus with tepid water and Condy, with a Higginson's syringe and long tube, night and morning, for several days, and was also obliged to pass the catheter for nearly a week, as she suffered from retention of urine. She made a slow, but good recovery. Menstruation was established in the usual time. She had no return of the hydatids, and has since had a healthy child at full time.

Remarks.—This case is interesting, 1st, from its comparative rarity; 2nd, as illustrating the difficulty of the *positive* diagnosis of the uterine contents. (*a*) The patient was positive she was *ençienté*, and also that she experienced the sensation of “quicken-ing” at the usual period. (*b*) Morning sickness was a prominent and distressing symptom for a considerable time. (*c*) The abdomen enlarged gradually and *symmetrically*, and apparently to normal extent; the breasts also enlarged, and the areolæ were darkened. (*d*) Auscultation showed a distinct “souffle,” less localised and more diffused than the normal placental “souffle.” Of course, the sound of the foetal heart was *not* heard. The view I took of the case was that there had been originally a normal conception, but that the placenta was prævia; that the severe hæmorrhage in the third month had destroyed the vitality of the ovum, and so modified the nutrition of the uterine contents as to favour the development of inferior organisms or hydatids. In fact, I look on the case as one of hydatid degeneration of the ovum. This view is supported by the fact that no hydatids were observed in the first or second discharges, though both were carefully examined,—for, the adaptation of the placenta over the uterine orifice, while permitting free hæmorrhage, would prevent the expulsion of hydatids. Dr. Tyler Smith, who has given perhaps the best description of this morbid condition, lays great stress on the more or less frequent occurrence of a “red currant juice” discharge, as a diagnostic point, but in this case no such symptom was observed. He also observes that the entire removal of the hydatids is a matter of no little difficulty to the physician, and of extreme importance to the patient, as the smallest portion left in utero will act as the nucleus of a recurring growth. It is very satisfactory to have to note that in this case there was no return of the hydatids, and that (as before mentioned) the patient has since borne a healthy child at full time.

Dr. L. ARMSTRONG exhibited a patient whose elbow joint had been primarily excised by a circular saw. The case recovered. Considerable movement of the joint was preserved.

LEAD PARALYSIS FROM DRINKING WATER.

By EDWARD CHARLTON, M.D.

CASES of lead poisoning on a large scale are now much less frequent than before, as the deleterious nature of water impregnated with lead has become much better known.

In March last, we were requested to visit a gentleman, who, with his family, had for some years resided in a large mansion in the neighbourhood of this town. The house was well situated on high ground, in a fine park with old trees, the Whittle Dene Water Company's reservoirs were only at a very short distance from the house, certainly not half a mile, but the pipes from thence had never been laid on to this mansion, the drinking water being entirely supplied by the rainfall on the very extensive roof, from whence the water was conducted into capacious leaden cisterns. These cisterns were kept scrupulously clean, being scoured out twice a year, and the water was always filtered before it was used for drinking purposes. There was no real spring water on the premises, the ground in the immediate neighbourhood being honey-combed by old pit workings. The family consisted of Mr. M., aged 69, his wife, about three years younger, three daughters and two sons. Mr. M. had enjoyed comparatively good health during his long and active life until October, 1872, when he became affected with severe colicky pains in the bowels, with constipation and great irritability of the stomach, which could hardly retain any food. He at the same time became paler than before, he had never much colour, and about the end of January last he observed that he was losing power over the extensors of the fingers. He first noticed the loss of power in the middle finger of each hand. He could grasp tolerably well with both hands, but could not open the middle fingers again. Soon after the other fingers became affected, and the wrist by the middle of March became completely dropped.

Mrs. M. had been a delicate woman for many years, but had become, like her husband, perfectly blanched, with a still deeper blue line on the gums. She, however, had had no palsy of the hands, but suffered from dyspepsia, a foul tongue, and general asthenia. On the 13th April, of this year, she had slight vomiting and anorexia, with some delirium the next day. Twenty-four hours after that she became perfectly insensible. There was much blowing respiration, with slight stertour. She could move both legs and arms, however, and once or twice got up of her own accord to pass water on the second day of the attack. On the first day she had passed it in bed unconsciously. On the 16th she recognised her family and tried to speak, but produced only inarticulate sounds. On the 19th, she was worse, extremely

restless, and muttered incessantly, though she could not be understood. After the first or second day, she recovered the use of the limbs, and on the 19th, actually, during the momentary absence of her attendant, rose from her bed and walked unaided into a room at the other end of the passage. These symptoms gradually disappeared, and by the end of May she was able to sit up, and even to move about the room. Her speech, too, improved, and it was possible to understand what she said, but up to the present time her articulation is very imperfect. We are disposed to refer this attack of paralysis in Mrs. M. to the influence of the lead poison, though it may of course be urged that such a seizure might easily have occurred at her advanced age. All the other members of the family were observed to have the blue line on the gums; the younger branches, however, had it only to a slight degree. They had not suffered from colic, but had complained of loss of appetite, especially for the morning meal. The water in the lead cisterns, contained, on analysis, abundance of lead. It was not so easily detected, however, in the filtered water drunk by the family, but at length it was discovered in quantities quite sufficient to account for all the symptoms. The dropped wrists in the case of Mr. M. are still nearly in the same condition, though his general health, his appetite and digestion, have evidently improved. It is possible that at his advanced age he may never recover the full use of his hands. There has never been any affection of the lower limbs, and he walks with a remarkably elastic step for a person of his years. His mental faculties are quite uninjured.

CASE OF SUPPOSED POISONING BY CARLINS.

By EDWARD CHARLTON, M.D.

ON the 8th of April, 1873, I was requested to see the family of Mr. Potts, farmer, at Roughlee, near Rothbury, which had been mysteriously attacked with illness.

On Sunday, March 30th, being Carlin Sunday, Mr. Potts and his wife, with a family of six children, partook, along with a boy from the adjoining farm, of the usual meal with carlins. The peas had been procured from the miller at Witton Shields, and it was observed that half of them were sprouted, some of the sprouts being upwards of an inch in length. This, however, we are assured, is not uncommon. The six children and the boy from the Bull Bush eat more heartily of the carlins than the parents did. The next day, Monday, March 31, the two boys, James, aged 9 years, and Thomas, aged 11, went to school. They had not complained of

indisposition on Sunday night or on Monday morning, but on returning in the evening James said he was sick and could not eat. Next day, April 1st, he was worse, petechial spots of peculiar character appeared on the limbs, the pupils were contracted, he was convulsed, but was never purged. The convulsions resembled those produced by poisoning with strychnia, but there was no difficulty in swallowing. The petechial spots were somewhat raised under the skin as if an effusion of coagulated blood had raised up the skin, they were darkest in the centre and faded away upon the edges. They soon after showed themselves abundantly on the face, many being the size of currants. Delirium came on, there was no abatement in the convulsions, and the child died on Thursday, April 3. No post-mortem examination was obtained.

On Tuesday, April 1st, Fanny, æt 18, began to complain of indisposition, and before night she had numerous spots, rather brighter coloured than the boy, on the lower limbs. Her legs at first felt stiff and cramped, but before midnight she had complete paraplegia. These symptoms gradually subsided, and had quite disappeared on the 8th. On the same night that the last-named took ill, Thomas, a stout strong boy, aged 11, refused his supper, and suffered much from dyspnea all the night. About 11 p.m. he vomited freely, and the dyspnea partially abated, but he had petechiæ on the limbs, and his tongue was extremely rough from elongation and enlargement of the papillæ. This condition of the tongue still existed when I saw him on the 8th, he was then still weak and said his legs were very heavy, but he had partially recovered his appetite.

On Wednesday evening, April 2, Annie, æt 5, was first taken ill. She vomited much, but neither she nor any of the family were ever purged. Their stools consisted of greenish mucus, rather tough and viscid, but never contained any blood. Annie was very much convulsed for two days, and had some delirium. The spots were less marked upon her than on some of the others. On the 8th April, she appeared to be almost paraplegic, but we have heard that she subsequently recovered.

On the same day as the preceding case (April 2), Charlton, a fine boy, æt 2, was attacked with vomiting and convulsions of severe character. Some petechial spots were also visible in this case. On the 8th, this child was still extremely weak, and the pupils were much dilated and scarcely sensible to light. Indeed, both he and his sister Annie lay as if life were fast ebbing away, but the little boy tried to put out his tongue when told to do so, and we observed that the papillæ were greatly enlarged, as in the case of Thomas Potts.

The last of the family who was attacked was William, æt 7. He

did not sicken till Friday, April 4th, and his was the most severe and rapid case of all, for he died on the 6th April, after 45 hours of severe convulsions and incessant delirium. The pulse was never much accelerated in any of these cases. The petechial spots in William were exactly of the same character as before described. No *post mortem* was made.

The boy from the Bull Bush farm, who had partaken of the carlins, was also ill, but soon recovered.

It was suggested by some parties that the attack was one of very malignant fever, and not from any vegetable or mineral poison. There is no reason to suspect any mineral poison ; there was no diarrhoea in any of the cases, and the symptoms did not, to our ideas, represent the action of any known form of mineral poison. As to malignant fever, it is strange that the disease did not spread further, and that the boy from another locality, who also partook of the carlins, was similarly affected. There was no malignant disease at that time in the neighbourhood. The parents of the children were not affected. The sanitary condition of the farmhouse presented nothing particular ; it is principally a stock farm, and there is an excellent natural slope for drainage into the burn below.

The only other alternative is that some vegetable poison was taken by the sufferers, but of what kind it is almost impossible to say. The symptoms somewhat resembled those produced in Germany by certain fungi growing on decayed sausages, and the people of the house thought that the carlins, being so much sprouted, may have produced or conveyed the poison. We could not, however, learn that other carlin pease supplied by the same miller had produced any such effects elsewhere. It then occurred to us that some poison may have been left in the vessels in which the food was prepared, but here, too, our enquiries were baffled. The occurrence of the worst case of all, that of William, not less than five days after partaking of the carlins, throws an additional veil of mystery over the whole affair.

Dr. GIBB had been called in consultation several years ago to a case of convulsions and death, the result of lead poisoning from drinking water from a lead cistern. The other members of the family had the blue line along the gums.

Dr. REOCH asked as to the state of the pupil. Thought the case recalled to mind the symptoms of belladonna poisoning.

Dr. L. ARMSTRONG mentioned a case of poisoning from fungi in which control of limbs was lost. The pupils were dilated ; the face bore a remarkable grin. Suspecting that some improper article had been taken into the stomach, the speaker gave an emetic, which brought up about a teacupful of small "toadstools." The child recovered rapidly.

Dr. PAGE described the only case under his observation requiring treatment after eating "carlings." A boy was brought to the Infirmary among the out-patients, who walked in a peculiar, "straddling" way. He complained of his rectum, which was distended. The speaker removed mechanically about half a pint of "carlings," and the lad went away relieved.

Dr. CHARLTON had, several years ago, attended a case of lead poisoning in some respects resembling those already mentioned. In this, however, the disease was aggravated by the patient drinking soda water made by Wolff's Apparatus. The patient recovered, and lived many years after.

NOTES OF A CASE OF MALIGNANT DISEASE OF STOMACH AND PANCREAS.

By C. STENNETT REDMOND, L.K.Q.C.P.

E. H., æt 39, was admitted a patient of the Gateshead Dispensary under my care on March 14th, 1873.

She had been complaining more or less of debility, indigestion, pains in stomach, excessive vomiting since the birth of her last child, but had been troubled with "a bad stomach" for the last two years. Her pulse was weak but regular, she was pale and rather anæmic-looking, her tongue was pale, flabby, with enlarged papillæ, and some white fur on dorsum; she said it was always very thick in the mornings. Bowels were costive, water passed well and natural colour; she had no cough. There was no pain in the stomach on pressure, and it only came on after food, especially flesh meat, and was relieved by vomiting, which was not then, however, a constant symptom. Her chief complaint was nausea, loathing for food, languor and lassitude.

FAMILY HISTORY.

She was the youngest of ten—five brothers and five sisters. One brother died at 18, from effects of a fright; rest alive and healthy, eldest sister æt. 63.

Mother alive and well, except for rheumatism, æt 85.

Father died fifteen years ago, æt 70, from what they termed a "carbuncle." Was quite hearty and well till about nine months or so before his death, when a small tumour or "kernel" appeared on one side of the neck, which got slowly larger and harder, with a good deal of pain, gradually causing difficulty of swallowing, but not of breathing, except he lay down, when he felt as if he were choking, so that he had to be propped up at night with pillows. It grew externally to about the size of an ordinary orange, and

never ulcerated. He wasted away much, and became sallow and emaciated before his death, the immediate cause of which was exhaustion. During the progress of the disease he went to the Edinburgh Infirmary, but nothing could be done there for him.

She (E. H.) was married at twenty-one, and has had eleven children alive, and two stillborn. Her first child did not walk till $3\frac{1}{2}$ years old, and suffered from a weak spine and rickets; the fifth died of hydrocœphalus; the seventh of tabes mesenterica; two others died of bronchitis, including the youngest, which was born on April 14th, 1872, and lived ten months.

During whole of last pregnancy was very much troubled with vomiting, which had not been the case with previous ones. This symptom subsided after gestation terminated; but ever after the stomach was very irritable, and animal food especially disagreed with her.

About a year and a half ago used to suffer much from severe pain after a full meal, which lasted about half an hour, but was always relieved by a little warm spirit and water.

I prescribed for mist. mag. cum rheo, with bismuth and hydrocyanic acid, and ordered her to confine her diet to beef-tea, milk, and farinaceous food. This relieved the sickness and pain, but there was no improvement in her general health. Continued the above till beginning of May, when her skin began to assume a straw-coloured icteroid tint, and her tongue was coated with yellowish white fur, and bowels confined. Ordered acid nit mur dil ʒii , acid hydrocyanic ℥xv. , quinine grs. iv. , mag. sulph. ʒi , aq. menth pip 38 ʒi ter die.

On May 9th, she told me for the first time that there was a tumor in her bowels. She had noticed it first about January, when it was about the size of a marble, but it has been getting steadily larger since. She was very unwilling to speak about it, and had only told me after the repeated solicitation of her husband. She seemed very nervous, but wished to make it appear she thought nothing of it.

I went to her house the next day and made a careful examination. I found an irregular oblong tumor, apparently about the size of a sheep's kidney, hard, *moderately moveable*; palpation, and moderate pressure produced pain, but not acute, and rather a nauseating feeling. It was situated nearly in the mesial line, about $1\frac{1}{2}$ or 2 inches above the umbilicus.

I continued the mixture, which she said was giving her relief, and ordered a belladonna plaister to be applied over the tumor.

Dr. Philipson saw her with me at the Infirmary in the beginning of June, and, after a very careful examination, diagnosed the case as malignant disease of the stomach.

I was rather inclined to refer it to schirrus of the pancreas,

especially looking to the persistent dyspepsia, which might be in a great measure referable to the absence of the secretion of that organ, but Dr. Philipson thought that the propinquity of the tumor to the surface, and also its mobility, pointed rather to the stomach, and probably the pylorus, as its seat.

In accordance with the woman's urgent wish, we informed her of the nature of the case, and of the impossibility of any cure. She thought "something could be done to it."

At the desire of her friends, she then went to the Edinburgh Infirmary, and I lost sight of her till the end of July, when she became an H.P. The old symptoms were much aggravated, the vomiting more constant and distressing, the tumor larger and more painful, and marked symptoms of constitutional implication ingravescent.

Of course, treatment was useless, except to palliate. I repeated the emplast belladonna, which relieved the pain, and gave her hydrocyanic acid and morphia and camphor mixture, and, finally, the sol. morphia alone in increasing doses, with mist. camph., which palliated the sickness and relieved the pain best of anything. For a month before her death the vomiting became persistent directly she took any food, a teaspoonful of liquids only being retained, and she frequently rejected even the morphia.

Death took place on November 11th.

Autopsy five hours after death. Body still warm, and not so emaciated as I expected to find it. On opening abdomen, several ounces of serous effusion were found in peritoneal cavity, but no flakes of lymph. *Omentum* contained moderate amount of adipose tissue. *Mesenteric glands* were hard, enlarged, infiltrated, and formed a hard mass at root of mesentery. Stomach distended, and contained several ounces of greenish-coloured grumous fluid; a hard mass occupied position of pylorus, and pancreas, and duodenum, and the parts were all most firmly matted together by very strong adhesions. Tied and cut œsophageal end of stomach, and in trying to break down adhesions round pylorus it snapped short off, quite brittle like. It was very thickened and infiltrated. Removed with much difficulty a hard mass corresponding to duodenum and pancreas.

The liver was natural size—pale, smooth, and healthy looking. Removed a portion for examination. Gall bladder was full; kidneys were natural size, and healthy looking.

On making an incision along the less curvature of stomach it was found to be infiltrated and thickened to the extent of an inch; gritty and cartilaginous on section, pale, with small vascular patches here and there.

Under microscope, exhibited well-marked malignant characters; cells multiform in shape, large in size, nucleated and free. Pyloric

orifice thickened and contracted. Mucous membrane of stomach was pale, and apparently not ulcerated. The large mass corresponding to pancreas exhibited similar characters. The liver was pale; cells presented normal appearance, but contained oil globules. No cancer cells observed.

I am indebted to the courtesy of the president (Dr. Philipson) for the microscopic examination.

REMARKS.

1st. I have given the details of the father's case as minutely as I could get them from the friends, and I think there is good evidence to warrant the conclusion that he died of malignant glandular disease; and taking this for granted, the present case is another very marked illustration of the close connection existing between struma and cancer as kindred hereditary diseases, and especially as illustrating in a most distinct manner the vicarious occurrence of these diseases in alternate generations.

2nd. It is perhaps worthy to note a collateral fact not bearing directly on her case, viz., her husband's mother died of recurrent cancer of uterus after amputation of breast. He is a strong, healthy man, an engine driver, æt. 45, but who never has had any illness except an accident or two, and yet two of his children died of scrofulous disease, and another showed marked constitutional symptoms of same.

3rd. No hæmatemesis nor melœna was observed at any period of the disease, nor was there any fatty matter found in the stools. The bowels during the whole of the disease were very constipated, and during the later months were relieved by simple oleaginous enemata.

4th. There is no history of phthisis on either father or mother's side, and yet the children are scrofulous.

5th. There was visible pulsation of tumor in last two months simulating aneurism, but of course, the diagnosis was obvious.

N.B.—I have been informed that one of her sisters died in Scotland from the same disease about a month after. I have also received a letter from Dr. Cahill, of Berwick, who attended the patient's father, informing me that, "to the best of his recollection, the old man died of cancer of the neck and throat."

ULCER OF DUODENUM—PERFORATION AND DEATH.

By CHARLES CARR.

THOMAS D., aged 48 years, a workman under the North-Eastern Railway Company, described as having always been a healthy and temperate man, was on the 8th of December, 1873, in his usual health. He worked at his employment all that day, and at nine o'clock in the evening, before leaving, had occasion to go to the water-closet, when he had a motion from his bowels, during which he had no pain or uneasiness. He was about to leave the water-closet, when he was suddenly seized with violent, burning pain in the upper part of the bowels. He reached his home with great difficulty, and continued to suffer through the night and following day, at two o'clock in the afternoon of which I first saw him.

He was sitting propped up in bed, in great agony. The pain extended over the whole of the abdomen, but was most intense across the epigastrium. The abdomen was considerably distended, was dull on percussion, and extremely tender on pressure. I may mention that he had an incomplete inguinal hernia on the right side, which was readily reducible.

The bowels had been opened that morning, his friends, of their own accord, having given him an enema, previously to which through the night he had taken 3 oz. of castor oil without producing effect. There was no vomiting; his pulse was 132; his tongue was dry; his countenance was expressive of great anxiety.

He was ordered an opiate every two or three hours; hot applications to the bowels; warmth to his feet; brandy and beef-tea in moderate quantities, frequently administered.

I saw him again four hours later. Since my last visit he had vomited a quantity of dark fluid blood; the other symptoms were in no way relieved. The pulse was feebler, the extremities were cold; in fact, collapse was now complete. He became gradually weaker, and at eight o'clock died, being twenty-three hours after the first aggression of the symptoms.

A *post mortem* examination of the body, made the next day, revealed signs of peritonitis, viz., an injected condition of the peritoneum, with patches of lymph here and there on it. The abdominal cavity contained about three quarts of dark-coloured and highly offensive smelling fluid, floating on which were oil-globules, probably some of the castor oil which had been taken the morning previously, and which had made its way into the peritoneal cavity through the perforation about to be described, for on examining the coils of intestine, an aperture about the size and shape of a coffee bean was found in the first part of the duodenum, just below the pyloric valve. Externally, it presented a clean, cut

appearance, the margin being sharp and well-defined, and having a dark areola which gradually merged itself into the natural colour of the healthy bowel surrounding it. It looked, in fact, as if sphacelus had taken place, and the centre portion had sloughed out. Internally, the opening was larger than it was externally, was oval in form, and its edges were rounded. In shape the ulcerated cavity somewhat resembled that of a shallow cone, with concentric lines round it, as if marking the stages by which the ulcer had reached the peritoneum. The coats of the duodenum were a good deal thickened in the neighbourhood of the lesion, but there was no enlargement of Brunner's glands. There were no more ulcers, nor were there any cicatrices of old ones. The stomach contained five or six ounces of blood, but, with the exception of being somewhat congested, was healthy. The rest of the abdominal organs were healthy.

The comparative rarity of ulcers of the duodenum, the insidious mode of their progress, and their fatal nature when perforation takes place, invest the subject with considerable interest. They are known to occur somewhat frequently after severe burns and scalds, which may be called the traumatic variety to distinguish them from those resembling the subject of this paper, which have their origin in some vitiated condition in the body itself, and which may be called the idiopathic variety.

Mr. Holmes, in his "System of Surgery," states that out of 125 miscellaneous fatal cases of burns which he had collected, and in which *post mortem* examinations had been made, 16 presented ulceration of the duodenum, although death was not directly attributed to this cause in all the 16.

Ulceration of other parts of the intestine after burns has in a few instances been noticed. In the case I have related, the ulcer was evidently of chronic nature, and had probably existed for months without the patient being aware there was anything wrong with him. He had had no pain, no vomiting, no indigestion. He had had nothing to warn him of his perilous condition. But the erosive process was slowly yet surely going on; and at last the outer covering of the bowel being reached, and that having undergone morbid change, the effort of defæcation was sufficient to overcome the remaining barrier, and the perforation was complete.

Concerning the pathology of the disease, with regard to the traumatic variety, it has been held that the ulceration commences in Brunner's glands; that the strain thrown on the intestinal glands, especially Brunner's, in separating the watery material from the blood, which accumulates in it from the suspension of cutaneous perspiration, causes the ulceration. But this seems to have been assumed rather than proved; for although enlargement

of these glands is sufficiently common after severe burns and scalds, yet ulceration frequently exists without any glandular enlargement whatever. Most probably, in the case before us, owing to embolism, a diseased condition of the coats of the arteries, obstruction of the portal vein, or some other cause that would lead to internal congestion, hæmorrhage had taken place in the submucous coat of the duodenum, and the extravasated blood corpuscles had infiltrated a patch of the mucous membrane to such an extent as to compress the capillaries, thus putting a stop to circulation and nutrition, and so, as Virchow pointed out, permitting the solvent action of the acid gastric juice to be exerted on the tissues deprived of the protective action of the alkaline blood. In support of this theory, extravasations have been found in connection with recent ulcers, and that they are not more frequently seen is probably due to the activity of the gastric juice in their removal. Moreover, these simple ulcers are only found in the stomach and upper part of the duodenum, that is, only in that part of the alimentary canal where its contents are acid, and where albuminous substances are dissolved with most rapidity.

REPORT OF A CASE OF ERYSIPELAS.

By ROBERT DAVIS.

MR. PRESIDENT AND GENTLEMEN,—I must apologise, if at the outset of this paper, if it may be so called, I may appear rather to beg a question than to answer one. My object is the rather to call the attention of the rising members of the profession to a certain form of disease, which in abler hands may lead to its elucidation and better recognition, both as to symptoms and treatment, than to try to do anything more than simply record my own slight experience of it, in the hope that some one would take up the subject, and give it that exhaustive investigation that I think, from its usually fatal character, it fairly deserves.

The disease to which I refer is a form of Erysipelas of a phlegmonous character, attacking the face, neck, and muscles of the chest. I have seen in a long experience but a few cases, but all of these so much resembling one another, not only in the character of the disease, but in the uniformly fatal nature of its termination, that I think I am justified in calling the attention of the profession, even in this crude manner, to a more attentive study of its nature, with a view to a more successful treatment.

The cases I have seen have been mostly in middle, or even later life, and the majority in females of a cachectic diathesis. One

case was in a female child after Scarlet Fever, where the little patient bled to death from the extension of the disease to some of the large veins of the parietes of the chest. The last case I saw, the recollection of which being more vivid in my mind, I will take, with your permission, as a typical one, was as follows :—

Mrs. B., a woman in middle life, naturally delicate, and though the wife of a publican, a temperate person in all respects, had had a family in the early part of her married life. She became the subject of uterine disease, for which I treated her, and so far with success, that after a considerable period of rest from gestation, she again became pregnant, and bore a strong, healthy child. She a second time became pregnant, and when in the sixth month of her pregnancy, she caught cold, which localised its effects in her right cheek, she having at the time several decayed teeth in the right lower jaw. In spite of all remonstrance she went about all next day, and on the day following I was hastily summoned to see her, when I found an extensive hard swelling of the right cheek, extending down to the throat, and accompanied with a good deal of fever of a sympathetic character.

I wished to, at once, divide the superficial structures with a scalpel, but her husband was not willing. I had previously given her Tn. Ferri Perchlon, during the day, and Dover's powder at night, ordering at the same time generous diet.

Next day, finding the disease progressive, I urged them to have a consultation, and at their request, I met Dr. Murray in the evening. He concurred in my view of the treatment, and I then proceeded to make a tolerably deep incision into the subcutaneous fascia, extending from the ear along the jaw to its mental process, and another in the line of the sterno-mastoid.

On the following day, I found the inflammation hard, extending to the other side, when I had to repeat the incisions.

My prognosis from the first was, I must confess, unfavourable, because I feared that premature labour was likely to be the consequence. So it proved; premature labour set in during the night, at a time when she unfortunately had no female nurse to attend her, and when I was sent for early in the morning, I had hardly time, after giving her brandy and ergot, to deliver her of a living six months' child, before she died from previous flooding exhaustion.

Of course, I am fully aware that this case cannot, under the accompanying circumstance, be looked upon as a typical case of fatality from the disease *per se*; but the result of the previous cases, having been all so fatal in their termination, in spite of consultations with surgical talent of the highest order in the locality, leads me to look upon this form of the disease with a gravity which I could well wish to see dispelled. I have been inclined for some years past to believe that Erysipelas prevails

more generally when Scarlet Fever is present, and that the discharge from Erysipelatous cases is most contagious, I fully recognise, for in the case just related, a female friend who had a very slight puncture in one of her fingers, has had an abscess in it, implicating the whole of the osseous structure.

I can also recollect that when attending a case of Phlegmonous Erysipelas, requiring several abscesses to be opened one after another, that I became the recipient, and means of transmission of the poison, to that extent that after having two fatal cases of midwifery clearly traceable to this source, I was compelled to give up all midwifery practice until such time as I seemed clear of the germs of the poison.

